Graduate! Philadelphia:

The Challenge to Complete

Graduate! Philadelphia is a joint call to action of the Pennsylvania Economy League – Southeastern PA and the Philadelphia Workforce Investment Board

PENNSYLVANIA ECONOMY LEAGUE
Information, Insight, Integrity.

Graduate philadelphia

PWIB philadelphia Workforce Investment Board

Full Report

June 2005

www.GraduatePhiladelphia.org

In the fall of 2004, the Pennsylvania Economy League (PEL) and the Philadelphia Workforce Investment Board (PWIB) came together to investigate and seek solutions to an urgent community challenge: to compete effectively in today's and tomorrow's economy, the city of Philadelphia will need to increase dramatically its supply of college-educated workers. One of the most effective ways to accomplish that challenge, it became clear, was to help the 80,000 Philadelphians who already have some college credit to finish their degree – to finish what they started. This report outlines the nature and importance of that challenge and outlines some fresh and novel approaches to attacking the challenge.

Both PEL and the PWIB have been deeply involved in addressing "human capital" challenges. In recent years, PEL has made improvement of workforce quality and connections a focus of its mission to make the region more competitive. One of the key outcomes in PEL's Great Expectations agenda, adopted in 2004, is to encourage Philadelphians to "Get a Degree" – to raise college degree completion in the region from 30 percent to 40 percent. Since its inception, the PWIB, a private sector-led body appointed by Mayor John F. Street, has bridged policy and practice in working to advance Philadelphia's competitive workforce advantage. The PWIB governs the local CareerLink system, which connects job seekers to employment and training and employers to a broad range of potential workers, and is accountable for setting the strategic direction for the city's over $200 million public workforce system. In addition to this effort, the PWIB is engaged in a variety of other initiatives designed to enhance the city's labor force, including WorkReady Philadelphia and Excel Philadelphia, all of which are designed to better align labor supply with business demands and thereby enhance Philadelphia's competitive advantage.

ACKNOWLEDGMENTS

Many people generously contributed time and expertise to the creation of this report. It could not have been written without their thoughtful insights and intimate knowledge of Philadelphia and postsecondary education issues. We wish to thank the following organizations and individuals:

The William Penn Foundation

Carolyn Adams (Temple University)
Elmore Alexander (Philadelphia University)
Jo Allen (Widener University)
Diane Athanas (Education Opportunity Centers)
Robert Baird (The Woodrow Wilson National Fellowship Foundation)
Brian Bosworth (FutureWorks)
Robert Bowman (New Jersey Council of Community Colleges)
Cory Bowman (University of Pennsylvania Center for Community Partnerships)
Joseph C. Bright (Wolf, Block, Schorr, and Solis-Cohen LLP)
Joseph Brown (Widener University)
Duane Bumb (City of Philadelphia)
Anthony Carnevale (National Center on Education and the Economy)
Victoria Choitz (FutureWorks)
John Colborn (Ford Foundation)
Helen Cunningham (Samuel S. Fels Fund)
Stephen Curtis (Community College of Philadelphia)
Fred Dedrick (Team Pennsylvania)
Sandra Edmunds (Pennsylvania Department of Education)
Geri Fiala (National Center on Education and the Economy)
Hal Fichandler (City of Philadelphia)
Carol Fixman (Philadelphia Education Fund)
Judith Gay (Community College of Philadelphia)
James Gearity (Pennsylvania Department of Education)
Terry Gillen (Collegiate Consortium)
Ellen Hannah (Center City Schools Initiative, Central Philadelphia Development Corporation/Center City District)
James T. Harris (Widener University)
Todd Hoffman (Collegia, Inc.)
Nan Isenberg (Philadelphia Futures)
Debra Kahn (City of Philadelphia)
Larry Krafft (Temple University)
Jackie Kramer (National Center on Education and the Economy)
Mark Lafer (Pennsylvania Higher Education Assistance Agency)
William Larkin (Pennsylvania Department of Education)
Paul Levy (Center City District)
Sharmain Matlock-Turner (Greater Philadelphia Urban Affairs Coalition)
James McKenney (American Association of Community Colleges)
Jeremy Nowak (The Reinvestment Fund)
M. Moshe Porat (Temple University)
Timm Rinehart (Temple University)
Sheila Royal-Moses (School District of Philadelphia)
Phyllis Snyder (The Council for Adult and Experiential Learning)
Heseung Ann Song (Osiris Group, Inc.)
Ray Uhalde (National Center on Education and the Economy)
Sandi Vito (Commonwealth of Pennsylvania)
Joseph West (CareerLink, Germantown Philadelphia office)
Michael Winston (Alfred Harcourt Foundation)

INDEX

LIST OF TABLES AND CHARTS

* A note on terms used in this report: "Philadelphia" and "Philadelphians" refers to the city, not to the Greater Philadelphia region. "Degree" refers to both two-year associate's degrees and to 4-year bachelor's degrees.

1. The Need for a High Quality Workforce in Philadelphia

In today's fluid, mobile, technology-driven knowledge economy, jobs move to people more than in any period in our history. In that context, Philadelphia's economy finds itself in transition from a predominantly manufacturing economy to a knowledge-based economy in which college credentials are considered a necessity, not a luxury. The city's ability to prosper in that context, to attract the potential jobs and investment represented at the June 2005 biotechnology industry BIO convention held in Philadelphia, will be largely dependent on the quality of the city's workforce.

With its current workforce, Philadelphia cannot compete effectively for this kind of economic opportunity. Only one in *seven* Philadelphians are equipped with a college degree, far lower than the national, state, and regional averages. Philadelphia ranks 92nd of the 100 largest U.S. cities in terms of the college attainment of its workforce, in a league with Newark, Detroit, and Hartford.

In Philadelphia's manufacturing past, the skills obtained through a high school education plus on-the-job training were good enough. A postsecondary degree was typically considered a middle-class luxury rather than a necessity for getting a family-sustaining job. Not any more: 70 percent of all occupations, especially those paying better wages and providing benefits such as health insurance and retirement plans, now require a postsecondary credential. A college degree today is worth $1 million more in lifetime earnings than is a high school diploma and is the single most critical key to moving out of what has been termed the "working poor" and into the American middle class.

Businesses, too, put a premium on college credentials in potential hires. They view a degree as a proxy for communications, math, science, and problem-solving skills and as evidence of trainability. Projections to the end of this decade show a 31 percent increase in demand for workers with associate's degrees and a 22 percent increase in demand for workers with bachelor's degrees. Demand for workers with no more than a high school diploma will increase by only 12 percent.

How then, can Philadelphia quickly add to its valuable stock of college educated workers? Much attention has been paid to the so-called "brain drain," suggesting that the biggest leak in the workforce pipeline is college graduates leaving the area after graduation. In response, the Knowledge Industry Partnership (KIP) was launched in 2003 and has quickly become a national model. In its research, KIP pointed out that Philadelphia is actually doing a good job of retaining native-born Philadelphians. Almost 86 percent of college graduates originally from Philadelphia continue to live and work here after graduation.

But what has also become clear is that the quickest and most effective way to increase our stock of college-educated workers is to look to native Philadelphians who were admitted to a college and accumulated credits but who stopped short of an associate's or bachelor's degree. One in six Philadelphians has some college credit but no degree, leaving Philadelphia as one of the few cities with more partial-completers than actual graduates. If the right incentives and supports can be put to work, these adults can "make a come back" and finish their degrees. This report suggests that these "Comebackers," largely ignored by educational institutions, policy choices, and

civic initiatives, could be the key to the growth of the college educated workforce in Philadelphia. By increasing our educated population, we attract more and better jobs, and higher employment at college graduate wages will improve the circumstances of the "Comebackers" and their families.

Who are these potential Comebackers? Broadly defined, they are lower-income working adults age 25 to 45 years old who are first generation college students. Many recognize that they need more education in order to move up the economic ladder. Often, it was not academic failure that prevented completion of their degree but instead such barriers as inadequate finances, conflicting demands on time, and lack of childcare or transportation. Many can only take courses half-time or less, further limiting their eligibility for financial aid, slowing their progress towards the degree and its associated rewards, and placing them in a cycle of ever higher risk for non-completion. But with 20 to 40 work years ahead in their future, the investment to get them to graduation at last would be regained in higher wages due to higher education, and, subsequently, higher tax revenues to the city.

The problem of non-completion and of how to encourage Comebackers has been largely invisible outside of academe. Yet the impact of this undereducated population on non-academic sectors is enormous. The numbers and history indicate that it is a systemic problem that cannot be resolved by institutions of postsecondary education alone. Business, labor, social services agencies, policy makers, and legislators all have a vested interest in addressing this problem together with educators and students.

To start a conversation about these issues and move toward a solution, the Pennsylvania Economy League and Philadelphia Workforce Investment Board have formed **Graduate! Philadelphia** – a partnership of those who understand the potential of taking on this challenge.

Graduate! Philadelphia's goals are to:

1. Raise the visibility of the need to increase the number of college educated people in Philadelphia
2. Work with Philadelphians who have some postsecondary education and help them get a degree (the Comebackers)
3. Set an expectation of postsecondary degree completion for all Philadelphians
4. Engage the business community in this effort.

Approximately 80,000 Philadelphians and their families stand to benefit directly from such an effort.[1] The impact on the city and region's economic health will be substantial.

2. Exploding the Myth

True or False? With more than 80 colleges and universities in the region, Philadelphia must have a large number of college graduates.

False.

Only one in seven Philadelphians over the age of 25 has an associate's or bachelor's degree.

Philadelphia ranks 92nd of 100 of the largest U.S. cities in the number of citizens who hold a college degree.

On average, over 40 percent of students who enroll in Philadelphia-area colleges don't get a degree within 6 years. The numbers are much worse for lower-income students.

Philadelphia is unique in that the number of people who started college but did *not* get a degree is higher than those who actually did complete a degree.

What Philadelphia does have is a large, untapped population that has accumulated some college credit but not completed a degree: 80,000 Philadelphians between the ages of 25 and 45.

3. Identifying the Leaks in the Workforce Pipeline

An educated workforce relies on a pipeline of students who are adequately prepared and educated at each stop along the way. The pipeline begins at pre-K and, while it never really ends, traditionally ends with the completion of a college degree. The educational attainment of our workforce is simply the end result of the education of the people who flow through that pipeline.

Unfortunately, Philadelphia's pipeline has several big leaks:

K-12: well over 20 percent of kids drop out by their senior year in high school.

High School Graduates: over half of the students who graduate from the city's high schools don't go on to college.[2]

Credit but No Degree: only 60 percent of people who enter a college program get a degree within six years; an unknown percent take some college courses at some point but don't get a degree.[3]

College Graduates: 36 percent of people who graduate from college in Philadelphia leave soon after.

Logically, then, there are three ways to improve the ultimate flow in the pipeline: improve students' preparation for college and increase the number of high school graduates who enroll in college; increase the percentage of college graduates who stay in Philadelphia; and increase completion rates among people who have some college experience. Fortunately, the first two of these are being addressed by powerful partnerships: the Philadelphia School Reform Commission is working with the School District to improve the academic preparation of children, and organizations like Philadelphia Futures, White-Williams Scholars, and the City Core Program are making it possible for more young people to go to college. The Knowledge Industry Partnership, with its OneBigCampus initiative, is leading activities designed to attract and retain students and recent graduates. The third – helping people finish a degree program – to finish what they started, is the goal of **Graduate! Philadelphia**.

In the long term, this leak will have to be fixed from within. Colleges and universities will have to develop practices and incentives that make it possible for students, once admitted, to graduate with a degree. In the near term, **Graduate! Philadelphia**'s mission is to identify ways to help the 80,000 people who have some college experience but are now in the working world become **graduates.** A degree can help open new opportunities for these individuals, and in doing so can improve the ability of the city's economy to compete for and attract the higher-wage jobs dependent on an educated workforce.

4. Understanding the Barriers to Completion

Why don't more people complete degrees, and what does that tell us about how to design efforts to help them?

Persistently high non-completion rates cannot be ascribed to the failure of 80,000 or more individuals to thrive in college.[4] Non-completion is a systemic problem and it has a huge impact on the business community as well as on neighborhoods, city government, labor, workforce development, and social service organizations.

Poor academic preparation is typically the first reason that comes to mind. Indeed, many colleges have developed academic mentoring and tutoring programs in an attempt to increase completion rates, but progress in this area has been slow, costly, and highly dependent on institutional missions and strategies.[5]

Socioeconomic status is the strongest indicator of both college access and degree completion. While 60 percent of college-eligible higher-income students attend college, and two-thirds graduate, only 21 percent of college-eligible lower-income

students attend college, and only one-third graduates.[6]

The options in financial aid for higher education illustrate how the deck is stacked against part-time, returning students. Conventional sources of subsidy – with their once-per-year, long lead-time application processes – are designed for traditional students. And even these programs have not kept pace with advancing tuition costs.[7] New tools, such as tax credits and incentives, favor the financially sophisticated and those with significant tax liability.

Completion rates also vary greatly among institutions because of differing missions and services. Private, 4-year colleges and research universities tend to have the highest graduation rates (68 percent, six years after enrollment) largely due to their more affluent and academically experienced student body. Locally, public 4-year colleges show average graduation rates of 55 percent after 6 years. At two-year institutions, where the majority of working adults enroll, 14-18 percent of students who are on academic tracks graduate.[8] At Community College of Philadelphia, 14 percent graduate after 5 years, but students who transfer to 4-year institutions (primarily Temple University) complete their bachelor's degrees at about the same rate as students who started at the 4-year institution, i.e., within 6 years of transferring.[9]

STUDENTS ENROLL,
BUT DO THEY GRADUATE?

Institution	Percent with a degree six years after enrollment
University of Pennsylvania	92 percent
Drexel University	57 percent
Temple University	54 percent
Community College of Philadelphia	16 percent

Source: U.S. Dept. of Education IPEDS database, 2003 for students enrolled in 1997.

Lack of previous family college experience, another important factor, is a chicken-and-egg problem. In families where parents do not have a college degree, children are less likely to aspire to and strive for a college degree. First generation college students are less savvy about navigating campus systems and are at higher risk for non-completion. Poverty, too, plays a major role in this cycle.

Also, student attitudes have a major impact on completion. Those who have been out of school for a few years may be apprehensive about their compatibility with a college environment and ability to compete academically against younger students directly out of high school. They may feel discouraged by the lack of programs and services geared to their needs at 4-year colleges where campus culture and the majority of academic and social support services are predominantly geared toward younger, residential, full-time students. Students with unclear educational and career goals and a fuzzy grasp of the connection between education and career growth are also less likely to persist to graduation. Absence of family support can be detrimental, too.

And lastly, "life happens" factors demand energy, time, and finances: a broken-down car makes getting to work and school more difficult, a health emergency diverts income away from education, a new baby or failing older relative requires more attention and energy, childcare arrangements fall apart…. When several of these factors coincide, as often can be the case for lower-income and first-generation students, the result is an almost insurmountable barrier to completion.[10]

Incentives and assistance for completion must address all these factors: courses should meet students where they live and work and at times that don't conflict with working hours and times when children need increased attention, e.g.,, late afternoon and early evening; financial assistance should allow for year-round

applications that accommodate year-round enrollment at community colleges; and support services should take into account past experience, life-style factors, age differences, and career goals.

5. Who are the Comebackers?

They are working adults, mostly lower income, working in entry-level or support positions with little job security and few benefits and where upward mobility is dependent on a better education. By definition, all Comebackers have some college experience, typically at a community college, but for a variety of reasons were not able to complete a degree; some took courses without fully realizing they could attain a degree. Many are heads of families and shoulder other adult responsibilities. Most lack social and financial safety nets, and their lives are susceptible to the chaotic disruptions typical of the working poor: a health emergency, broken down car, or housing crisis can interrupt their studies for months or years. Yet, a college degree could provide exactly the economic boost to insulate them from future disruptions as well as set a family precedent for attending college.[11]

Until now, they have been a largely invisible population. While many programs exist for traditional 18-24 year-old students, few, if any, concerted efforts exist for this Come Backer group. Yet they promise the quickest and most effective way to increase our stock of college-educated workers:

- Since most seek an associate's degree, they would provide the critical backbone for Philadelphia's industries, supporting health, office, and computer services.
- They have proven that they have initiative and drive by investing time and money in college courses.
- They are at the prime of their working lives and could have 20 to 40 or more productive working years during which they could benefit from a college degree.
- They are committed to staying in Philadelphia: 97 percent of Community College students continue to live and work in the city after graduation.
- All things being equal, e.g.,, finances, time for studying, adult students tend to complete courses at higher rates (75 percent) than do younger students (61 percent), and some research indicates that under the right conditions, adult students get better grades.[12]

Investing in Comebackers would impact several generations at once. As heads of households, not only do they provide for the economic health of their children and grandchildren, but they also are role models for good learning habits and educational motivation.

6. How Big Is the Payoff?

Benefits to the individual

Although it might seem obvious to those with a tradition of 4-year college attendance that having a degree increases earnings and decreases the likelihood of unemployment, the numbers are worth a closer look.

Clearly, the biggest rewards come with a 4-year college degree: an individual's potential earnings are double those of a high school graduate, and over a lifetime earnings are increased by $1 million. A bachelor's degree is worth 45 percent more in potential earnings than an associate's degree and 73 percent more compared to the earnings potential of a college dropout.

An associate's diploma increases earnings potential by 35 percent compared to a high school diploma, and by 20 percent compared to the earnings potential of a college dropout. In Philadelphia in 2003, the average salary of a community college graduate increased from $30,000 to $39,000 in the first year post-graduation.[13]

Having a college degree also promises more career control and better resilience in a bad economy. A college degree today is the

single most important key to moving out of what has been termed the "working poor" and into the American middle-class.

Will there be jobs for the newly credentialed? According to Pennsylvania Department of Labor and Industry projections, Philadelphia will require 12,500 more workers with college degrees by 2010. The greatest need will be for people with associate's degrees in occupations that are the core of area industries: information technology specialists, allied health workers, engineering and pharmaceutical technicians, and general office support staff. In fact, these projections show a 31 percent increase in demand for workers with associate's degrees, versus a 22 percent increase in demand for workers with baccalaureate degrees, and a 12 percent increase in demand for workers with only a high school diploma.

Benefits to the business community

For businesses, the key to economic success in a global economy is a workforce with up-to-date knowledge and technical skills, the flexibility to respond quickly to changing needs, and the ability to evolve swiftly – the multi-faceted skills, knowledge, and trainability associated with a college degree. Seventy percent of all occupations, especially those paying better wages and providing essential benefits such as health insurance and retirement plans, now require a college credential. And while businesses often can relocate middle- and upper-level employees, filling entry-level and support positions – those typically requiring associate's degrees – relies on the local workforce.

Benefits to the region and the city

Comebackers stay in Philadelphia's workforce. Ninety-seven percent of Community College of Philadelphia's students work in the city after graduation, compared with 66 percent of graduates from 4-year colleges. And tax revenue from a college graduate is 3 times that generated by a high school graduate. College grads also are more likely to own their homes and have nearly triple the disposable income.[14]

Other benefits to the community are less tangible, but worth mentioning: college grads are more likely to vote, volunteer, support charities, and be involved with their children's schools. In addition, college graduates are less likely to commit violent crimes or need social services.

If 10,000 Comebackers completed their college degrees by the end of the decade:

- City tax revenues would increase $3.96 million in the first year, and $273.2 million over 30 years
- Purchasing power would increase $35 million in the first year, and $1.05 billion over 30 years, not counting potential salary increases
- Social service expenditures would save up to $10 million in the first year, and $300 million over 30 years.[15]

7. Recommendations

The stakes are high: our economy, already hampered by an under-educated workforce and facing the looming Baby Boomer mass retirement, requires an immediate inflow of better-educated workers. In the short term, our best strategy is to bet on people who already live and work here, who have proven they have the drive to succeed, and who have some experience—that is they have already started college and now need a boost to finish. **Graduate! Philadelphia** provides several provocative yet doable models for moving Comebackers toward a college degree, and for raising the value of our workforce.

1. Recognize that we are all responsible for the education of our workforce. Graduate! Philadelphia provides a new context for college degree completion that requires engagement of the "consumers" of college graduates – the business community, labor, legislators, policy leaders – as well as the "producers" and the students themselves.

2. Realize the untapped potential of the 80,000 adults who have some college experience by getting them to degree completion. These are working adults, most of them lower-income, who have made significant sacrifices to start college. Targeting those who have at least one year's worth of degree-credits and who possess the academic ability (as evidenced by past performance) will quickly result in new, work-ready graduates. An outreach campaign could channel Comebackers to a "re-engagement" center where they would receive individual academic, financial, career, and logistical counseling for finishing a degree in a timely manner.

3. Create appropriate support structures for adult students. The re-engagement center would replace the need for a series of visits to several offices in order to coordinate a return to studies. A cohort-based, condensed weekend course of study (similar to many executive MBA approaches) would answer many of the needs of lower-income working adults.

4. Develop statewide requirements for postsecondary institutions and put special emphasis on programs that accommodate the needs of working adult students. Community colleges are the primary gateway to postsecondary education for adult students, but we need more fluidity across levels of education so that they don't become the end post for students.

- Mandate more 2+2 alignment and transfer programs between community colleges and 4-year institutions to allow smooth transitions for students seeking a 4-year degree and to minimize the number of credits lost when a student transitions to a 4-year degree
- Mandate fluid and flexible cross-institutional curricular alignments and reimbursement practices to allow students to take courses at multiple campuses that are geographically convenient to their work or place of residence
- Develop curricular alignment with the secondary education system so that high schools can prepare students for the content and types of learning they will need in order to succeed in college
- Increase state funding for community colleges
- Improve reporting of student achievement and track student achievement across levels of education.

5. Provide incentives and rewards for businesses that encourage and support their employees in getting college degrees. Support systems include tuition reimbursement but also flextime (extended or condensed workweeks, paid time off for classes, extended lunch hours), public recognition of achievements,

mentoring/counseling, etc.[16] It is in our best interest to keep such forward-looking companies in the city.

6. Provide employer and college incentives for students to return to school: e.g., flexible work schedules, clearer tuition reimbursement policies. Flexible scheduling and course programming: late evening and weekend courses, courses that start more often than once a semester, several time-slots per module/assignment, opportunities for group-discussions and sessions with the instructor, online/blended courses; amnesty expired credits, waive readmission fees, offer bookstore vouchers, child-care, and transportation assistance; package existing credits to count toward a degree; recognize work-based learning experiences; create a more flexible application process for PHEAA (Pennsylvania Higher Education Assistance Authority).

7. Connect college completion programs to *Job-Ready PA* (Governor Rendell's workforce agenda in the FY 2006 budget). College completion programs for the working-adult population can quickly impact our economy and thus maximize the impact of tax dollars invested in raising the educational levels of our workforce. While *Job-Ready PA* currently addresses the preparation of high school students for immediate entry to college, the reality is that many lower income students delay their entry to college until they are in their twenties or later, and for many the main barriers arise not at the start of college but after enrollment: getting to completion. Since many of these degree-less former students are already in the workforce, an investment in completing their education will have an immediate, direct impact on our economy.

Ultimately, every Philadelphian should have access to a college education and the appropriate incentives and support structures for graduation. The recommendations set forth by **Graduate! Philadelphia** are also designed to "filter down" to affect Philadelphians and college education in the area more broadly.

Graduate! Philadelphia's models for Comebacker degree completion can make Philadelphia stand out among cities and regions in its own "come back" strategy. It is the right thing to do for our residents. It is the smart thing to do for business. And, it is the best way to position the region as a bold and innovative leader in human capital development.

1. THE NEED FOR A HIGH QUALITY WORKFORCE IN PHILADELPHIA

In today's fluid, mobile, technology-driven knowledge economy, businesses locate where the local workforce answers their needs. While top talent can be relocated, support positions—most of which now (70 percent) require well-educated workers with at least associate's degrees—are filled locally. In Philadelphia, only 14 percent of the workforce has an associate's or bachelor's degree. The city's low postsecondary educational attainment levels hamper its economy and limit the earnings potential of many of its residents.

Businesses Require Employees With College Degrees

Businesses place a premium on a college credential. They seek employees who have proved they know how to learn, who can shift and adapt with changing needs, are literate in science and math, are good communicators, can think critically, solve complex problems, and have an understanding of different cultures – all skills that derive, in considerable part, from a college education. As the American economy continues to specialize in knowledge-based high-tech and services, this preference will intensify.

Indeed, economists estimate that over two-thirds of all jobs—regardless of whether they are "old" or "new" economy—*require* education beyond high school.[17] According to the U.S. Bureau of Labor Statistics, by 2010 the marketplace for workers with an associate's degree will increase by 31 percent, and the demand for workers with a bachelor's degree will increase by 22 percent. On the other hand, the demand for workers with a high school diploma only will grow by about 12 percent.

In Philadelphia, the Pennsylvania Department of Labor and Industry projects that businesses will need at least 12,500 new high-skilled, well-educated knowledge workers by 2012 just to keep our economy functioning as it is, and another 24,500 in the immediate suburbs. Economic *growth* will require larger numbers of educated, work-ready employees: people with robust technical and so-called soft skills who are the backbone of their industries. A Pennsylvania Economy League compilation of knowledge-intensive industries in which the Philadelphia region has comparative strength found that over 40 percent of positions in these industries currently require at least an associate's degree.[18]

Industry and related occupations (formulated by PEL)	Percent of employees likely to require at least an associates' degree
PROFESSIONAL SERVICES	
Computer hardware/software/network support and database management	70 percent
Management and public relations	52 percent
Research and testing services	63 percent
Advertising	46 percent
FINANCE, INSURANCE, REAL ESTATE	
Security and commodity brokers	60 percent
Non-depository institutions	43 percent
HOSPITALS AND HEALTH SERVICES	
Offices of other health practitioners	51 percent
Health and other allied services	54 percent
Medical and dental laboratories	43 percent

Investigations into local Brain Drain concerns, conducted by the Knowledge Industry Partnership (KIP)[19] since 2003, show that while only 29 percent of non-native Philadelphians who attend college here stay after graduation, 86 percent of native-born Philadelphians stay in Philadelphia after they graduate from a 4-year college. Virtually all of Community College of Philadelphia's (CCP) students continue to live and work in the city after graduation.

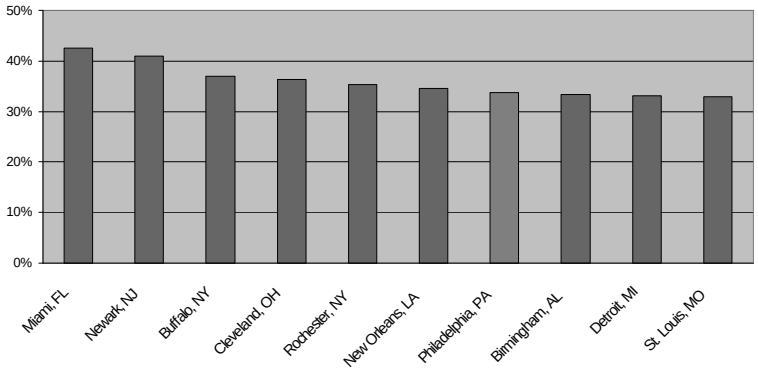
Worthwhile efforts at retaining non-native college graduates continue through KIP. However while these numbers may seem reassuring, it's important to keep in mind that this is 86 percent of only 14 percent of the city's working-age adults - not a large number. Without a significant increase in the number of well-trained employees, Philadelphia cannot meet current business demands let alone compete against other major cities. And if not tended to now, this shortage will reach disastrous proportions with the retirement of the Baby Boomers over the next two decades.

Low Educational Attainment Levels Correlate With High Poverty Levels

Low educational attainment levels impact the city in other ways as well. As will be shown in more detail in the section "How Big is the Payoff?", income levels in America are highly correlated with postsecondary educational attainment. In brief: a 4-year college degree almost doubles an individual's income and a two-year degree increases it by half compared to a high school diploma. Yet, poverty and low postsecondary educational attainment levels are a chicken-and-egg problem: poor people are less likely to attend college and to graduate, and in turn, people without a college degree tend to be poorer. Lower-income residents consume more public services than they contribute in tax revenue. Furthermore, children whose parents did not go to college are less likely to attend college themselves, contributing to the trans-generational poverty cycle.

In 2000, Philadelphia ranked 7th of the 100 largest cities in the country in its proportion of low-income households.[20] In 2003, median household income in Philadelphia was $33,000 – the same as it had been in 1990. The national average that year was $40,000.[21]

Cities with Largest Shares of Low-Income Households



Data Source: Alan Berube and Thacher Tiffany, *The Shape of the Curve: Household Income Distributions in U.S. Cities, 1979–1999.* Brookings Institution Report, August 2004. Based on 2000 Census Data. http://www.brookings.edu/dybdocroot/metro/pubs/20040803_income.pdf

The 2001 report **Flight or Fight**[22] describes the challenges facing Philadelphia if it is to stay competitive as a place to live, work, and locate businesses. One of the central recommendations of the report is that the area needs a better-educated workforce. The Brookings Institution's study *The Shape of the Curve: Household Income Distributions in U.S. Cities*, counters the broadly held convention that the flight scenario of businesses and middle- and upper-income families to the suburbs is the unassailable plight of major cities. Cities such as Atlanta, Boston, Chicago, Los Angeles, and Washington, D.C. have curbed flight and created high-growth regional economies by ensuring a well-educated workforce and a higher proportion of high-paying jobs at knowledge-based industries.[23] By far the fastest, surest way to increase the number of college-educated workers in Philadelphia is to "grow our own," to ensure that more native-born Philadelphians go to college and complete their degree.

2. EXPLODING THE MYTH

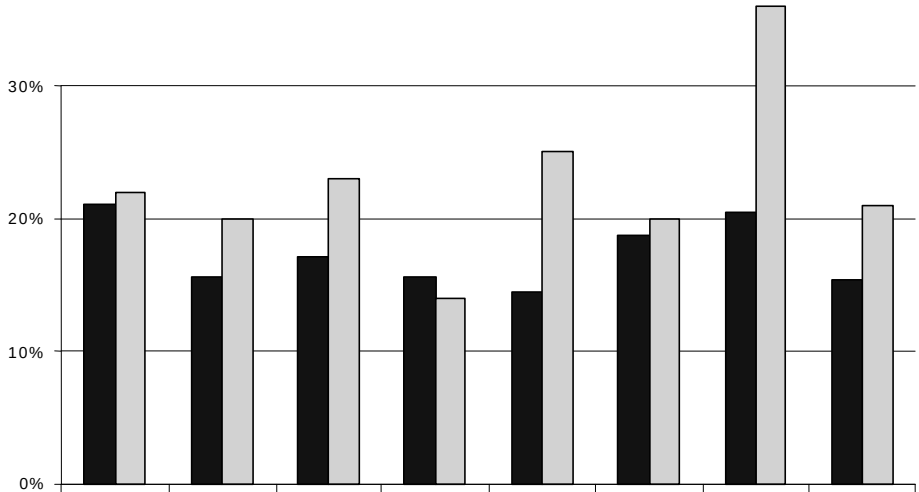
The region being home to over 80 colleges and universities – one of the densest higher-education centers in the country, surely Philadelphia's residents are among the highest educated in the U.S.?

Not so.

Only one in seven Philadelphian working-age adults has a college degree. Just as worrisome: one in six have some college experience, typically more than one year, but did not complete their degree. More than 80,000 Philadelphians between the ages of 25 and 45 are in this second category. As a result, their earnings potential is only slightly better than someone with only a high school diploma, and compared to a college graduate, these non-completers will make on average $1 million ***less*** in lifetime earnings. Barring immediate intervention, another 45,000 Philadelphians who are in college now are at risk of leaving college without a degree by the end of the decade.

In national comparisons, Philadelphia ranks 92nd of the 100 largest U.S. cities in the education level of its workforce, with only 14 percent of working-age adults holding an associate's or bachelor's degree. Seattle boasts over 36 percent and Boston is at 25 percent. Even Chicago and Baltimore are higher, at 20 and 19 percent respectively. Philadelphia is in league with Detroit and Hartford, CT (11 percent), and we are just slightly ahead of Newark, NJ, (9 percent).[24]

Comparison of College vs. Some College but No Degree



	US	PA	Region	Phila	Boston	Chicago	Seattle	Wash. DC
College, no degree	21%	16%	17%	16%	15%	19%	21%	15%
College degree	22%	20%	23%	14%	25%	20%	36%	21%

Data Source: US Census 2000, Population 25+

Philadelphia has more people who started college but never completed their degree than people who started and finished college.

Philadelphia Has Seen Little Improvement Since 1990

In peer cities such as Boston, Chicago, Seattle, and Washington, D.C., where the realization came early on that economic growth is linked to educational attainment, the proportions of residents with postsecondary degrees has increased at least five percent over the past decade. Not so in Philadelphia:

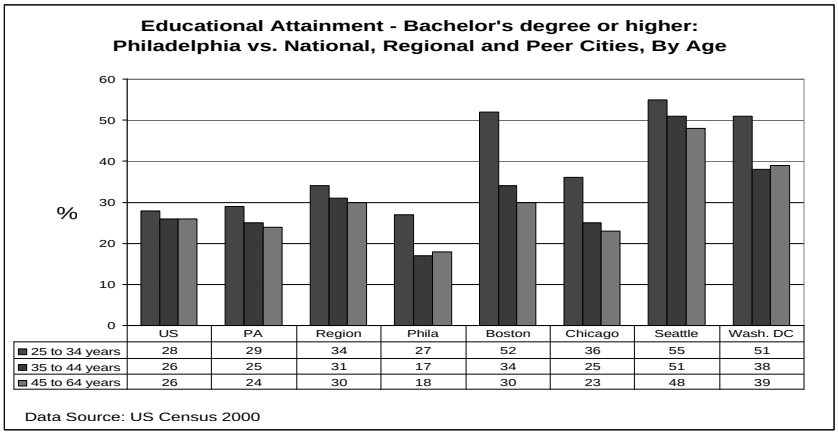
City	Percent Change in Percent of Residents with a Bachelor's Degree, 1990-2000
Boston	+5.6
Chicago	+6
Philadelphia	+2.7
Seattle	+9.3
Washington, DC	+5.8

(Source: U.S. Census 1990 and 2000)

Further research is required for a finer analysis of how much of the increase in educational attainment can be attributed to more local residents going to college versus an inflow of new, well-educated residents. However, Census data show that while Denver and Seattle had marked population increases from 1990-2000, at 18.6 percent and 9.1 percent respectively, Boston (2.6 percent) and Chicago (4 percent) showed small growth, and both Philadelphia (-4.3 percent) and Washington (-5.7 percent) exhibited negative growth (U.S. Census 1990, 2000 data).

Postsecondary Educational Attainment Is Not A New Problem in Philadelphia

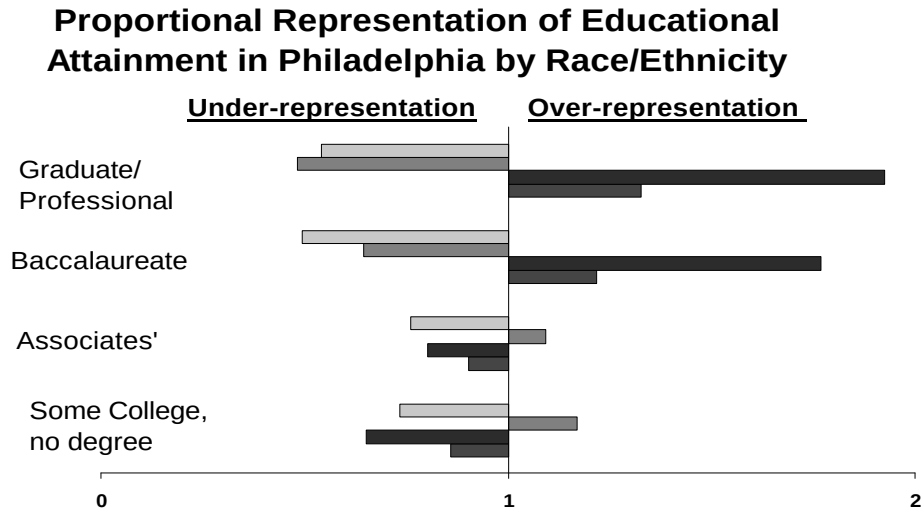
Education levels in Philadelphia are low at every age level: less than one in five Philadelphians age 25-29 has a college degree, compared to almost 50 percent in Seattle, well over 30 percent in Boston, and 25 percent in Washington. Our younger adults, ages 18-24, are completing college within the traditional 6-year period post-high school at far lower levels – about half – than peers in these cities.



Minorities Are Underrepresented In Postsecondary Education

In Philadelphia and other major urban centers, another cause for concern is that minorities are underrepresented in postsecondary educational institutions, and subsequently their postsecondary attainment levels are low. It's widely held that the cause is socio-economic. Still, if we want our workforce to look like our population, racial disparity is an important component of the overall educational attainment issue.

The largest minority group in Philadelphia – African-Americans, who, incidentally, make up about half the city's residents – are severely underrepresented at the bachelor's degree and higher, limiting their participating in the largest financial benefits from postsecondary education. They are, however, proportionately represented at the associate's degree level. Latinos fare worse than any other group. (Asian postsecondary educational attainment patterns follow those of whites or even exceed them.)



	College, no degree	Associates' degree	Bachelor's degree	Graduate/Prof. degree
Latino	0.74	0.76	0.50	0.54
African-American	1.17	1.09	0.64	0.48
Asian	0.65	0.80	1.77	1.93
White	0.86	0.91	1.22	1.33

Data Source: US Census 2000

3. IDENTIFYING THE LEAKS IN THE PIPELINE

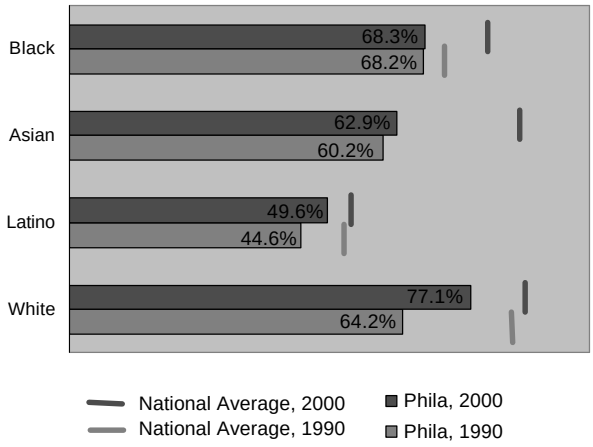
A city's workforce depends on the local educational pipeline which starts, arguably, in the earliest years of childhood. Philadelphia's pipeline leaks at four critical junctures: (1) student persistence through high school to graduation (K-12 system), (2) access to college, (3) success in college, and (4) retention in the area post-graduation.

1. High School Graduation Rates

Only three-quarters of Philadelphia's adults have a high school diploma, compared to almost nine-tenths of adults nationwide,[25] and minority populations in Philadelphia have even lower high school graduation rates – only two-thirds of African-Americans and less than half of Latinos graduate from high school.[26] Specifically, in 2003, the U.S. Census Bureau reported that 85 percent of all adults 25 years or older had completed at least high school, an all time high.[27] In the same year, in Philadelphia 74.5 percent of city residents 25 or older had a high school diploma in 2003. However, graduation rates for Philadelphia public high school students, gauged within a year of students' expected graduate date are lower, about 60.5 percent.[28] The Philadelphia School Reform Commission has made graduation rates one of its top priorities in their "Declaration of Education" 2008 goals and hopes to raise graduation rates to 80 percent.[29]

Looking at the data for the ten-year period 1990-2000, white Philadelphians have made the most progress of any group over the past decade. Nationally, African-Americans are fast closing the gaps with whites and Asians, but not in Philadelphia. Asians in Philadelphia are not doing as well as they are nationally, and Latinos have experienced the least progress.

Change in Percent of Philadelphia Vs. National Population 25+ With At Least A High School Diploma, 1990-2000



Data Source: US Census 1990, 2000

2. College Access

Two factors influence college access above all others: academic preparation, and socio-economic status. Additional factors are college-readiness tests such as the SAT and ACT, and the ability to fill out an application and follow through and general social readiness for college. Socio-economic status obviously includes the family financial assets available to the student. Where students grew up and the schools they attended also have a major impact on college access, whether

their parents went to college or not, and the availability of general family support for going to college, and a good understanding of the processes of preparation for college.

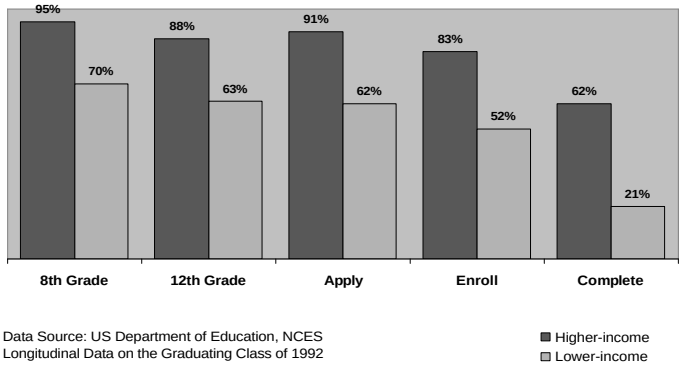
Nationwide, high school students are better prepared than ever to enter college, as evidenced by more students taking advanced placement courses and advanced math, science, and writing courses, and schools providing college-related counseling. "Measuring Up 2004: A National Report Card on Higher Education," a recent report by the National Center for Public Policy on Higher Education, shows that over the last ten years there has been a marked improvement in the preparation of high school students for college.[30]

The School District of Philadelphia's reform efforts over the past two years have addressed the issue of academic preparation, and they include goals for developing standardized secondary course offerings across high schools, increasing the number of Advanced Placement and International Baccalaureate courses across high schools, and hiring of new counselors. In 2002-2003, however, composite SAT scores in Philadelphia's neighborhood high schools were well below 800. Fewer than one quarter of schools had more than 75 percent of students taking the SATs. Indeed, at the majority of schools only 50-60 percent of students took the exams, and in ten schools it was less than 30 percent of students. At the city's ten magnet schools most students take the SAT, but only students at the top two, Central High and Masterman, had average SAT scores of over 1000. (As reference, the average SAT score for entering freshmen at Penn State's main campus was 1250 that year, and 1060 at Temple University. This means that the vast majority of Philadelphia's high school graduates do not qualify to enter either Temple University or Penn State, the two institutions that have, historically, educated the most Philadelphians. Coincidentally—or not—both Temple and Penn State have become increasingly selective in their admissions requirements over the past decade.)[31]

College-going Expectations: Interestingly, most high school students expect to attend and graduate from a 4-year college. When they are in the 8th grade, 95 percent of students from higher-income and 70 percent of students from lower-income families expect to attend and finish a 4-year college degree. Four years later in the 12th grade, 88 percent and 63 percent of high- and low-income, college-qualified[32] students plan to attend a 4-year college and 91 percent and 62 percent respectively take college entrance exams and apply. Eighty-three percent of high-income students and 52 percent of lower income students finally enroll in a 4-year college.[33]

Only 1 percent of high school graduates expect to end up with an associate's degree, yet over half of high school graduates attend a community college, and a less than a quarter transfer to a 4-year college.

Expectations Vs. Reality of Going to a 4-Year College



Data Source: US Department of Education, NCES
Longitudinal Data on the Graduating Class of 1992

Who Enrolls and Where?

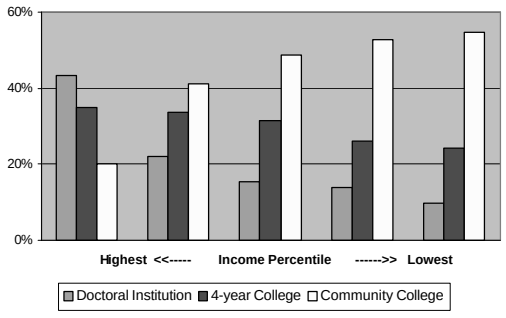
Over the past 30 years there has been a 32 percent increase in the number of "traditional" students enrolled in college nationally. At least some of this increase has been attributed to the trend of students applying to more than one college – students on average now apply to 9-10 colleges, hoping to increase their chances of getting accepted.[34] Nationally, 63.3 percent of the high school graduating class of 2000 enrolled in college the October after completing high school. Two years later, 75 percent are enrolled, and this last number is expected to rise to 80 percent by 2006.[35] In Philadelphia, in 2000, only 17 percent of 18-24 year olds were enrolled in a postsecondary degree program.[36]

So-called non-traditional students, adults age 25 and over, are going to college at higher rates than ever before. Over the past three decades there has been a 156 percent increase in the number of non-traditional college students. In fact, non-traditional students now make up almost half of college enrollments. They tend to take courses part-time due to financial, employment, and family responsibilities. Many start at two-year colleges, and some transfer to 4-year colleges. In Philadelphia, 8 percent of the population aged 25-34 were enrolled in college in 2000, about half the rate of the "traditional" 18-24 year-old group.

Almost half of all full-time undergraduate students attend 4-year public institutions and another quarter attends 4-year private institutions. The rest begin their postsecondary education, full time, at two-year public community colleges. The growing for-profit postsecondary sector enrolls 4 percent of full-time students and the two-year private nonprofit sector enrolls only about 1 percent.

Socio-Economic Status: More than four-fifths of higher income students attend a 4-year program (at a 4-year college or a doctoral institution), versus one third of lower income students. Lower-income students tend to attend either public universities or community college, where graduation rates are lower.

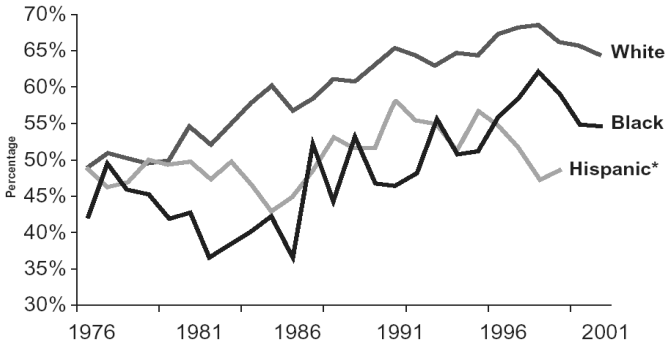
National Distribution of Type of Institution First Attended by 1992 12th Graders, by Family Income



Data Source: Adelman, Cliff. Postsecondary Attainment, Attendance, Curriculum, and Performance Selected Results From the NELS:88/2000 Postsecondary Education Transcript Study (PETS), 2000. US Department of Education, 2000

College Enrollment Patterns by Race/Ethnicity: Nationally, white students are well represented at 4-year colleges and universities. More than half of Latino students – 55 percent begin their postsecondary education at community colleges, as do 41 percent of African-America students, and 37 percent of white students.[37] Although the numbers of minority high school students who enroll in college have increased significantly over the past two decades with the growth of minority populations, but the white-to-minority ratio has changed more slowly.

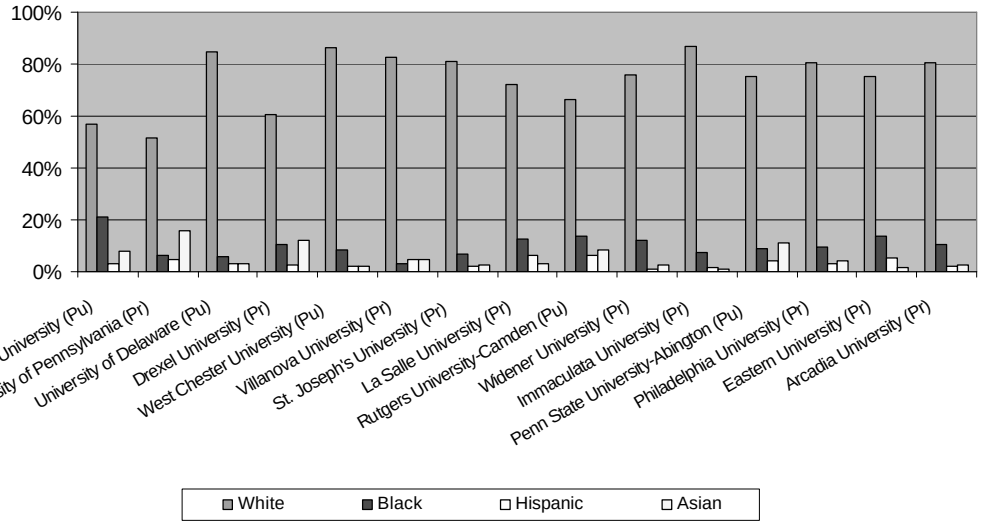
National 4-Year College Enrollment Rates for 16-24-Year-Old Recent High School Graduates, 1976-2001, by Race and Ethnicity



Source: The College Board report "Trends in College Pricing, 2003."

In Philadelphia, 2002 4-year college enrollments at area colleges show highly differentiated enrollment patterns for minority and white students, given that the city's population is about half minority. The 15 largest 4-year colleges and universities in the Philadelphia region enroll a predominantly white student population.

4-Year College Enrollments, Greater Philadelphia area, By Race/Ethnicity



SOURCE: IPEDS, nces.ed.gov/ipeds/cool/search.asp

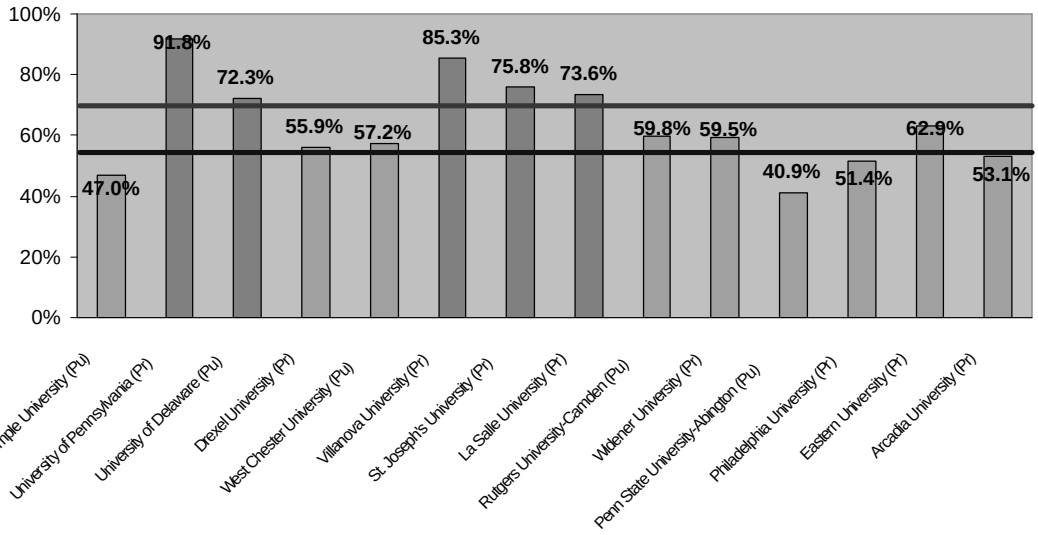
Several college preparation and academic enrichment programs exist in Philadelphia. For a list, see the Appendix.

3. Success In College

Enrolling in college does not guarantee degree completion.

There are approximately 80 baccalaureate-awarding institutions in the Greater Philadelphia region. Following national trends, students enrolled at private, 4-year colleges or universities are more likely to complete their degree than are students at public institutions: **on average, 67.7 percent of students attending local private institutions graduate within six years**, although at several of these institutions graduation rates are far higher. The national average is 68 percent. On average, **55.4 percent of students attending local public institutions graduate within six years**, and here again there is significant variation across institutions. The graduation rate national average at public institutions is 53 percent.

4-Year College Graduation Rates After 6 Years For 1996 Cohort
(For the 15 Largest Colleges and Universities in the Philadelphia Area)



Green indicates graduation rates above the national average of 68%

Local Graduation Average, Public Institutions — Local Graduation Average, Private Institutions

SOURCE: IPEDS, nces.ed.gov/ipeds/cool/search.asp

Note: These measures of completion do not take into account students transferring from one 4-year institution to another. Transfer or "swirling" rates are very high: many students transfer at least once and complete their degree at a different institution than the one at which they started: 32.3 percent attended two institutions and another 18.9 percent attended more than two. Tracking student swirling necessitates a wide, cross-institutional system that does not currently exist, although the Federal government as well as some State governments, Pennsylvania included, are starting to call for such a system.[38]

So Philadelphia's colleges and universities graduate students at or above the national average. But who graduates?

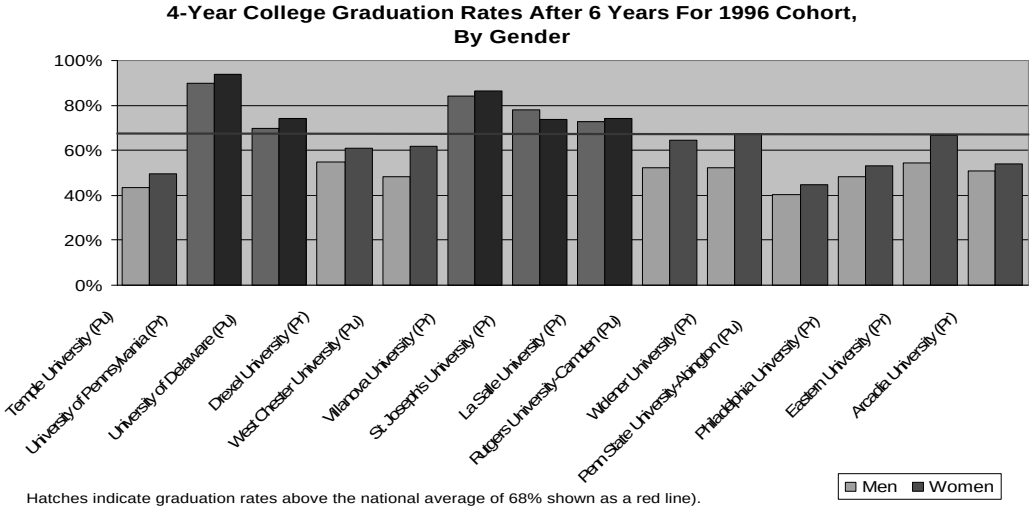
Degree Completion Rates Correlate With Socio-Economic Status

Nationally, 62 percent of higher-income students complete their 4-year degree within six years of enrollment, yet only 21 percent of lower-income students graduate within that same time frame – less than a third of those who expected, and at one-third the rate of their wealthier peers.[39]

Consider the big picture: approximately two-thirds of higher-income high school graduates enroll in college, and two-thirds graduate from college. On the other hand, just half of lower-income high school graduates enroll, and one-fifth graduate. This means that out **of every 100 higher-income college-ready students, 40 will get a degree, versus 7 of every 100 lower-income college-ready students.** If a college degree is the keystone to upward economic mobility, most poor people have very little chance of ever attaining the middle class. The result is a highly stratified society where economic success has little to do with merit.

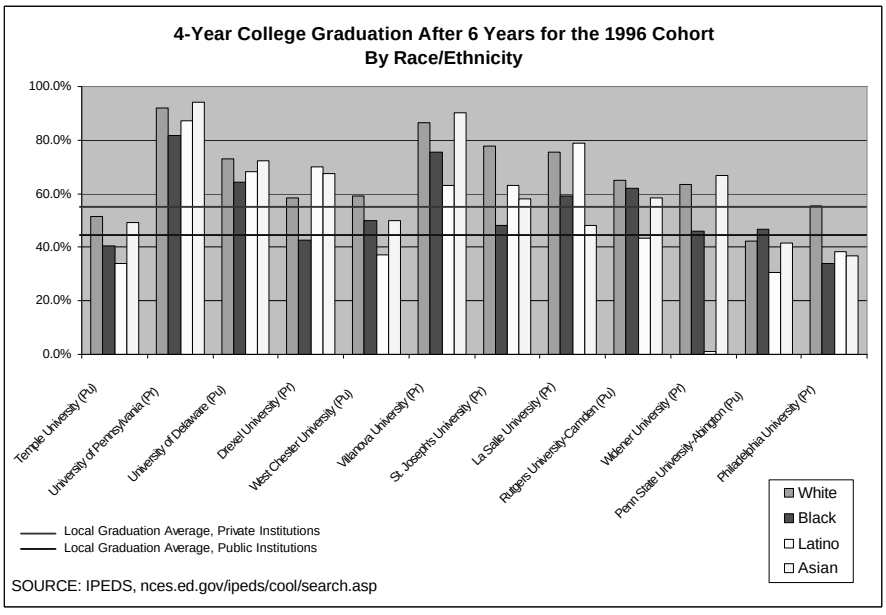
Other Variables

Gender: Women graduate at slightly higher rates than men.



Hatches indicate graduation rates above the national average of 68% shown as a red line).
SOURCE: IPEDS, nces.ed.gov/ipeds/cool/search.asp

Race/Ethnicity: African-American students typically graduate at significantly lower rates than whites and Asians. There are not many Latino students in area colleges, but in some colleges their graduation rates are above average.



SOURCE: IPEDS, nces.ed.gov/ipeds/cool/search.asp

Graduation patterns at two-year colleges: Focus on Community College of Philadelphia which serves half of all college students in Philadelphia.

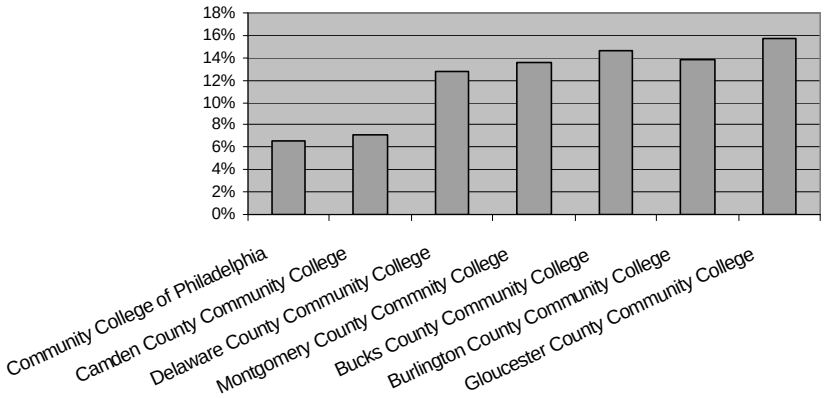
Community colleges offer two distinct tracks – the career, or credentialing track, and the academic transfer track. Also, there are advanced courses for high school students, GED, Adult Basic Education (ABE), English as a Second Language (ESL), general literacy, and other remediation programs. In addition, community colleges offer life-long learning opportunities for occasional students who are not pursuing a degree.

The career-credentialing track offers associate's degrees for office managers, paralegals, mechanics, first responders, and for technicians in many fields. The career track also offers certificate programs and skills-enhancing programs that are not part of a certificate or credential.

The academic transfer track can serve students as academic remediation and preparation for a 4-year college education. For students interested in pursuing a bachelor's degree, it can also serve as a less costly alternative to the first two years of a bachelor's degree. Community colleges also offer dual-enrollment programs that ensure acceptance to local 4-year colleges and universities. Community College of Philadelphia (CCP), for example, has dual-enrollment programs with Temple, Drexel, LaSalle, Cabrini College, and Pierce College. CCP also offers program-to-program articulations with 35 local colleges and universities, guaranteeing CCP graduates advanced standing in specific programs at partner institutions.

Overall graduation rates at community colleges, which tend to be far lower than those of 4-year colleges, must be taken in the context of the variety of learning paths that community colleges offer: many students take occasional courses with no intention of completing a degree, and the "open access" status of community colleges (anyone can enroll) means also that these institutions deal with more inadequately prepared students than do other higher education institutions.

2- Year College Graduation Rates Within 150% of Normal Time to Completion, 1996 Cohort, Community Colleges in the Philadelphia Area



SOURCE: IPEDS, nces.ed.gov/ipeds/cool/search.asp

Note: CCP's own reports cite graduation rates of 14% in recent years.

Academic transfer-track graduation rates at CCP: From 1995 – 1999, 40 percent of CCP students dropped out without completing any credits. Thirty percent left with fewer than 24 credits, 18 percent left with more than 24 credits but no degree, and slightly over 10 percent graduated with an associates' degree. It is worth noting that in 2003, the five-year graduation rate at CCP increased to 14.5 percent. Graduation rates for career program students (those seeking certificates) are significantly higher than those for transfer program students. [40]

Two-thirds of all transfer track students (and one-third of Applied/Career track students) who completed their associate's degree transferred to a 4-year program within nine to fifteen months of graduating from CCP.[41] Graduation rates for these students after transfer are similar to those of students who start their postsecondary education at 4-year institutions.[42]

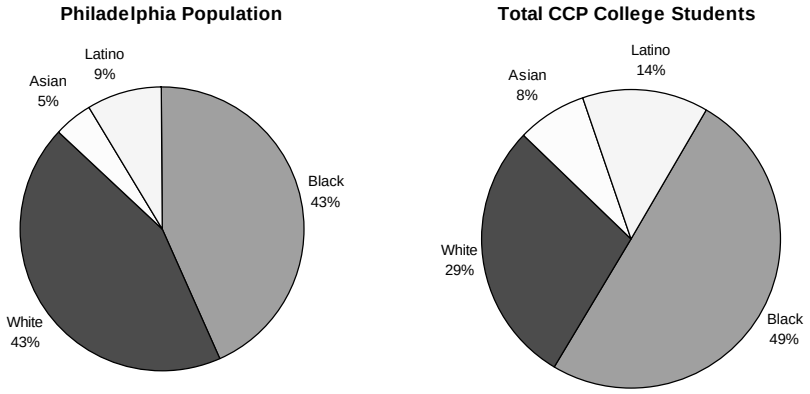
Consider, however, that students who took six years to graduate post-transfer will have spent over eight years getting their degrees. The number of students in the transfer track ranges from 500 to 600 each year. Almost half of all transfer track students lost up to 12 credits (one semester's worth) when they transferred to a 4-year college. CCP students most often transfer to Temple, Drexel, LaSalle, and Penn State Universities, but CCP graduates are also found at all the other colleges and universities in the greater Philadelphia metropolitan area.

Graduation Rates Depend on the Population Served

CCP, the largest of the community colleges in the Philadelphia area, serves 40,000 students each year. The majority of these students are not on the academic/transfer track, and many are lower-income working adults. Montgomery County and Bucks County community colleges have positioned themselves primarily as an alternative to the first two years of a 4-year degree, and thus they focus resources and recruiting on college-bound 18-24 year-olds.

Ease of access is another factor in completion of an associate's degree. Students enrolled at multiple sites are more likely than single-site enrollees to persist to subsequent semesters, complete a larger percentage of credits attempted, and graduate.

The student body at CCP has more minority representation than in Philadelphia overall, reflecting CCP's role as the largest point of entry into postsecondary education for minorities in Philadelphia, especially for African-American students:

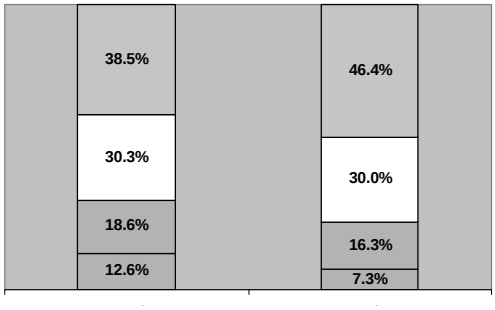


Data from The Economic Impact of Community College of Philadelphia, Institutional Research Report #140, Community College of Philadelphia, Office of Institutional Research, October 2004.

The socioeconomic make-up of the student population also impacts graduation rates. Research shows that institutions with higher concentrations of lower income students have lower graduation rates than do institutions with lower concentrations of such students.[43] CCP serves many working adults from lower-income families, who tend to enroll part-time and complete at lower rates than the younger students who attend the suburban community colleges.

Women tend to complete their associate's degrees more than do men, and they progress further than men before dropping out.

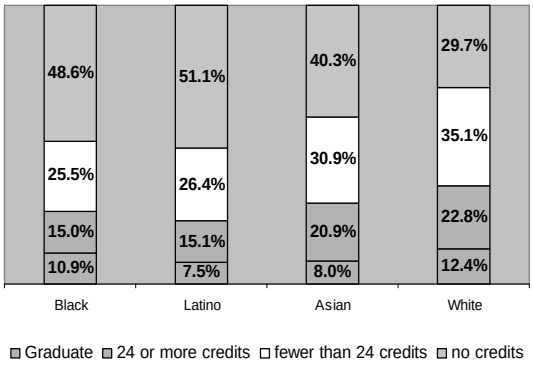
CCP Student Status at Departure by Gender, 1999



Similar to trends at 4-year colleges, African-Americans and Latinos tend to graduate at lower rates than do whites. Asians also graduate at lower rates than whites.

African-American and Latino men have the highest non-completion rates, and they tend to accumulate very few credits for transfer.

CCP Student Status at Departure by Race, 1999

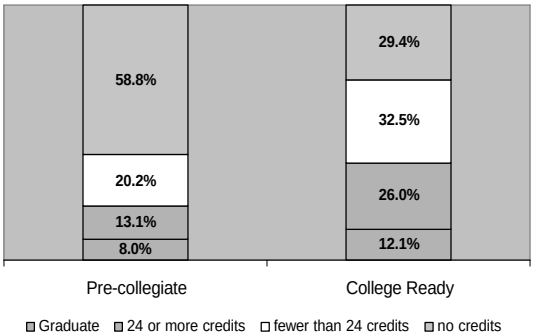


Student Attrition at CCP: When Students Leave, Why They Leave, and Their Academic Success at Departure. Institutional Research Report #120, Office of Institutional Research, Community College of Philadelphia. June 2001.

Academic preparation has a big impact not just on degree completion rates but also on course-completion patterns. Students in need of more remediation tend to drop more courses than their college-ready peers.

Current efforts to raise the quality of the area's human capital by increasing educational attainment levels focus on two junctures in the education pipeline: access to college, and retention of graduates in the area (the topic of the next heading.) Access to college includes school reform efforts pertaining to the transition from high school to college and college preparation.

CCP Student Status at Departure by College-Readiness at Entry, 1999



Student Attrition at CCP: When Students Leave, Why They Leave, and Their Academic Success at Departure. Institutional Research Report #120, Office of Institutional Research, Community College of Philadelphia. June 2001.

It's important to note that postsecondary institutions are concerned with low graduation rates, and some institutions do a better job of providing the necessary supports for their students.[44] There is—and has been for a few decades—much discussion within higher education about ways to improve retention and completion rates, but it is a slow, expensive prospect, and financial resources, public and private, are scarce and unstable.

A common argument is that by increasing the number of students entering the postsecondary system, we will eventually increase the number of students exiting with a credential. Yet the "loss" in the system is extremely costly for the 40 percent of college students who never finish, and for any investment in college access that does not address completion. **It is time for other sectors to shoulder some responsibility for higher education outcomes, particularly those that benefit from it directly – the "consumers" of college graduates: businesses, non-profits, government, and communities.**

4. Retention In The Area Post-graduation

At the other end of the college pipeline are efforts to encourage college graduates to stay in the region after graduation. Most notably is the Knowledge Industry Partnership (KIP), founded in 2003. A 2004 KIP report, *Should I Stay Or Should I Go*[45], highlights the importance of funneling college graduates to the local workforce. Only 29 percent of students not originally from the area stay here after graduation, compared with 40 percent in Boston. But while Philadelphia can do a better job of keeping more of non-native grads here, the report also finds that 86 percent of native Philadelphians choose to stay here after graduation. As we have seen, however, this amounts to 86 percent of only one sixth of the city's adult residents.

What's Missing?

Looking solely at the two ends of the college pipeline dangerously ignores the tremendous human and financial waste when students drop out without obtaining a degree after they have enrolled in college. Furthermore, without ensuring that students who do enroll in college complete their degrees, efforts earlier in the pipeline will not be successful either: high school students and their parents need to know that if they go to college they stand a good chance of graduating, and they need to know *how* to succeed in college.

As the data here shows, **half of Philadelphia's college students do not complete their degree. Improving the college completion rates of native-born Philadelphians is the fastest, surest way to increase the number of graduates who choose to remain in the region.** Special attention should be given to CCP students who have a strong commitment to staying in the area. Of CCP students who were employed, virtually all were employed in Philadelphia within one year of leaving the college. A very small number worked in the Greater Philadelphia metropolitan area.[46]

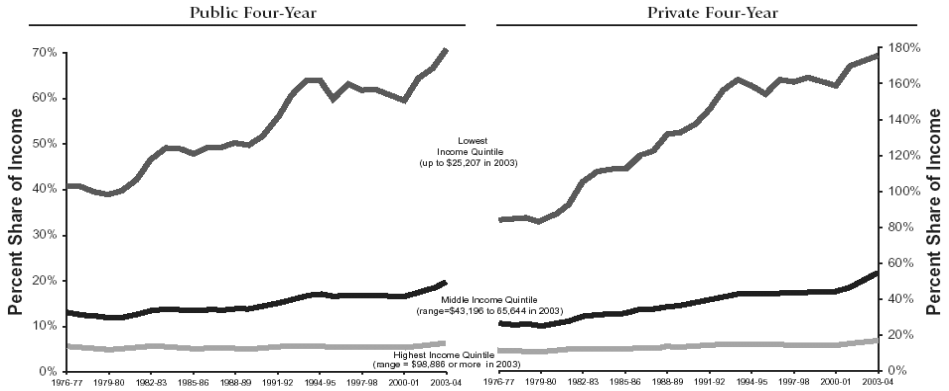
4. UNDERSTANDING THE BARRIERS TO COMPLETION

Financial difficulties and weak academic preparation are the leading causes of degree non-completion. Indeed, **the lowest-achieving wealthy students are just as likely to attend college as the highest-achieving poor students. And the highest-achieving poor students attend college at one-seventh the rate of their wealthy peers.** While each of the factors mentioned in this section can be overcome separately, the combination of several factors can be overwhelming. The Education Trust finds that because of poor academic preparation, financial difficulties, first-generation status, and lack of adequate support structures, only 7 percent of lower-income students complete their degrees versus 60 percent of higher-income students.[47] Groups that are especially at risk for non-completion due to multiple attrition predictors are young black males and lower-income single mothers – the very profile of many CCP students.

The Cost of College

College tuition increases have far outpaced average increases in family income. The College Board's report "Trends in College Pricing 2003" found that over the 10-year period ending in 2003-04, average tuition and fees rose 47 percent at public 4-year colleges and universities and 42 percent at private institutions. As a share of family income, such increases are disproportionately heavy for lower-income families:

Total Charges at Four-Year Institutions
as a Share of Family Income, 1976-77 to 2003-04:



NOTE: Total charges include tuition and fees plus room and board. Income data ranges are based on 2001 figures updated using changes in the CPI.

SOURCE: Annual Survey of Colleges, The College Board, New York, NY; pre-1987-88 tuition data are from Integrated Postsecondary Education Data System (IPEDS), U.S. Department of Education, National Center for Education Statistics; income data from the U.S. Department of Commerce, Bureau of Labor Statistics.

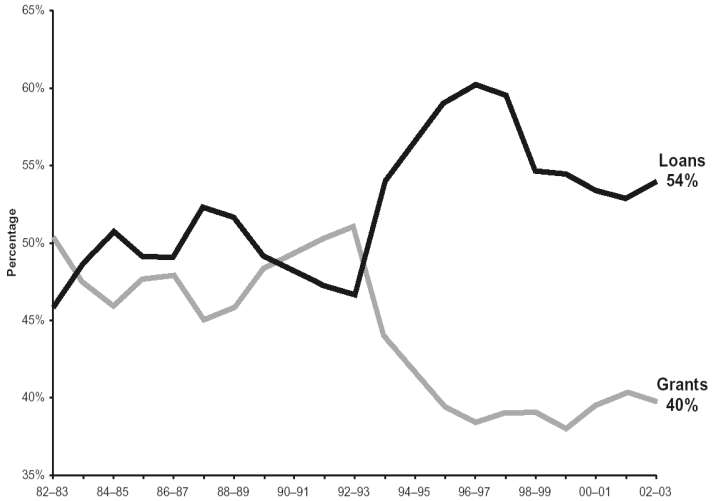
As a result, 71 percent of lower-income students now graduate from college with high debt loads – half of these loads are considered "unmanageable" by financial advisors. Only 44 percent of higher-income students graduate from college with any significant amount of debt.

A decade-long trend away from need-based grants (subsidized aid) and toward loan-based financial aid (unsubsidized aid) compounds the tuition burden and further adversely affects the ability of low-income and moderate-income students to attend college. Tax credits and tax incentives also favor better-off students because lower-income students may not have the tax liability to benefit from these options, nor access to sophisticated financial advice on how to make the best of the limited resources available for college expenses.

Four major sources of subsidized financial aid (grants) are available to students: federal (Pell, TRIO), state, institutional programs, and national scholarship programs. The latter are usually few in number and highly competitive.

Federal aid: Subsidized Federal funding (grants) has declined sharply over the past two decades in comparison with unsubsidized funding (loans) due to a shift in federal policy away from need-based grants (e.g., Pell) to loans (e.g., Stafford):

Twenty-year trend: proportion of federal loans vs. federal grants



The Pell Grants Program, the major source of subsidized financial aid to lower-income students is severely under-funded. The program is currently running a deficit of $4 billion, up from $1 billion in each of the last two years. The 2005 allocations will likely provide only about $800 million toward this deficit. In addition, the Pell Grant maximum has not kept abreast of inflation and rising tuition costs. The maximum, about $4,000, amounts to only 37 percent of average tuition cost at a public 4-year college, compared to 84 percent when the program was initiated in the mid 1970's. A new pilot allows a few colleges to award 130% of the current grant amount to especially promising students.

Stafford Loans constitute the most common form of federal financial aid. Fifty billion dollars, or 60 percent of the U.S. Department of Education's financial aid for students, is now allocated through loans. Furthermore, the total amount for non-need loans now exceeds the total amount available for need-based loans, a situation that further shifts allocation away from poor students. Stafford loan limits have remained unchanged since 1992 and their inflation-adjusted dollar value has declined.

Tax credits and tax incentives for relief from college tuition: The Department of Education's 2004 budget included $10 billion in credit and deductions for direct educational expenses and interest on student loans. Students from lower-income families receive fewer of these benefits, as they may not have the tax liability to benefit from the credits and incentives. Moreover, receiving financial aid further reduces a student's eligibility for tax relief.

State aid: Pennsylvania state policies have permitted tuition increases that have outstripped growth in family income (except for the highest-income families) making lower- and moderate-income families increasingly dependent on (increasingly unavailable) financial assistance. **Pennsylvania received an "F" grade for college affordability** in "Measuring Up 2004: The State Report Card on Higher Education."[48] This report concluded that "our colleges and universities, even community colleges, are simply too expensive for many of our residents." The cost of one course credit at CCP is well over $75, which translates into an annual, full-time tuition rate of $2,500 – among the highest in the country.

The cost to lower-income students of attending a 4-year college, after student financial aid sources are exhausted, can amount to $3,800 for a public institution and $6,200 for a private institution, which can mean 35 percent of the annual income of a lower-income family in Philadelphia. A decade ago, a lower-income family in Philadelphia could expect to contribute 24 percent of its annual income to cover unmet college tuition and residency costs. [49] In comparison, unmet tuition costs for high-income families are $100 for a public 2-year college, $400 for a public 4-year college, and $3,000 for a private 4-year college.[50] Students and their families are expected to cover these amounts with loans. Lower-income families, however, for financial and other reasons, are more reluctant than their better-off peers to take out loans to fund a postsecondary degree.[51]

State financial assistance to students has undergone shifts similar to those at the federal level, and with similar results: focus and dollars have been shifted away from grants towards awards based on merit. This has impacted college-going patterns by rewarding and supporting those (usually middle- and upper-income) students already most likely to attend college rather than students who are economically needy and/or from racial/ethnic groups that are historically underrepresented in postsecondary education.[52]

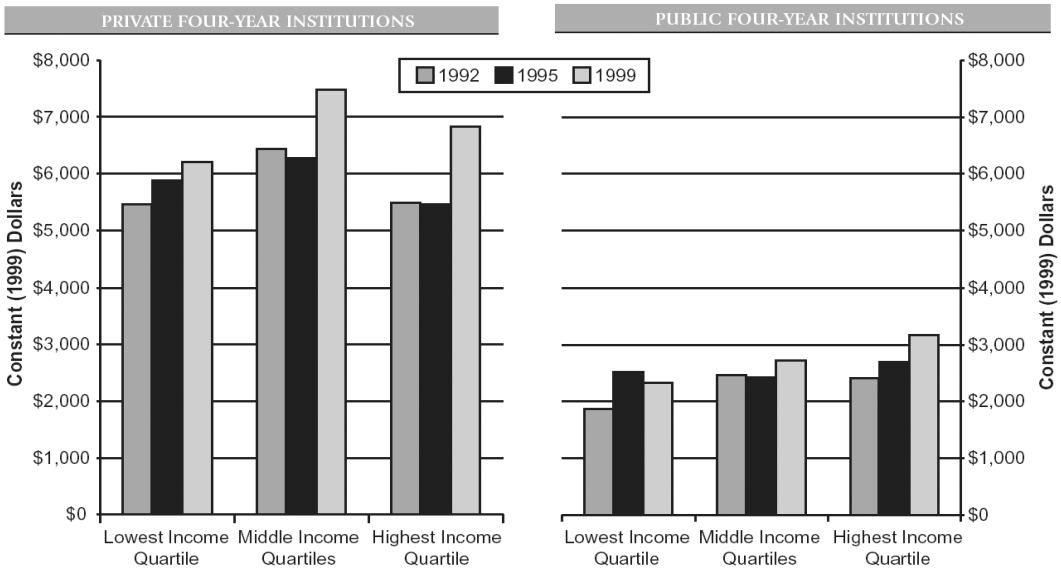
The Pennsylvania Higher Education Assistance Agency (PHEAA), the state-directed postsecondary lender currently provides Pennsylvania residents with grants of up to $3,300 per year. Furthermore, with its once-per-year application cycle and early spring deadline, PHEAA is geared toward "traditional" college students who enroll in the fall. Students who enroll in winter or in the summer, and who did not plan far enough in advance, as is typical of working adults who are also part-time students, do not benefit from PHEAA's programs. Additionally, students who go to college at less than half time—again, typical of adult students who work full-time—are ineligible for PHEAA funding.

Another vehicle for saving money for college, the new 529 plans (pre-paid tuition and pre-tax college savings) further disadvantage low-income families that do not have access to sound investment advice. Pre-paid tuition plans are considered a direct contribution toward tuition and other expenses, and reduce student eligibility for financial assistance dollar-for-dollar. Tax-free savings plans increase the amount of assets considered available to the student for funding his or her education, but assets are not considered a direct contribution to tuition and so reduce eligibility by a far smaller percentage.

A recent report from the Lumina Foundation finds that low-income families have a financial *dis*incentive to save for college: by saving, they may reduce their eligibility for need-based aid as determined by the need analysis system. The report concludes, "If the government's intent is to use federal tax subsidies to encourage Americans to save more for college, it would be wise to direct those subsidies to lower-income families."[53]

Institutional aid: Institutional grants—also called tuition discounting—can range from a few hundred dollars to full tuition. While nominal aid amounts vary somewhat by income levels at each type of institution, affordability as share of family income is vastly disproportionate for lower-income families compared to their middle- and higher-income peers.

Average Institutional Grant Aid per Recipient at Four-Year Institutions
by income quartile and type of institution.



From the College Board's report "Trends in Student Aid, 2003." Updated October 23, 2003.

Tuition discounting was developed as a tool for achieving institutional goals, whether to increase racial, ethnic, or economic diversity, or to attract academically superior students and students with other special skills. While individual institutions have successfully used tuition discounting to produce their desired enrollment effects, when combined across all institutions this practice has significantly reduced available need-based grant aid at 4-year colleges, and that in turn has reduced students' opportunities to choose among public and private institutions.[54]

Commercial loans: In response to the growing, unmet need for financial aid, commercial loan providers have flooded the college arena. Here again, lower-income students and their families are at a disadvantage. With fewer assets as collateral and lower incomes from which to pay off loans, lower-income borrowers may find that their commercial borrowing options, again, are less attractive than those available to higher-income borrowers.

These trends in institutional, state, and federal aid policy have occurred in combination with a changing national economy and rising postsecondary tuition rates. As a result, low-income students are feeling the greatest burden.

Combining Work and Studies – A Recipe For Slow Progression: Of those lower-income students who do attend college, many opt to work extensively during the academic year. Federally funded college work-study programs, limited to 20 hours a week, often provide insufficient assistance. On average, lower-income students work 27 hours per week, and many must work 35 or more hours to meet college expenses.

Yet, students who work more than 20 hours a week are more likely to experience difficulties in keeping up with academic demands and a full course load. For example, students in baccalaureate programs who take fewer than 20 credits in their first year and who frequently drop courses are less likely to advance in college and to complete their degrees. Students with fewer than 60 academic credits overall are less likely to complete a bachelor's degree.[55]

At community colleges, where most students must work full time, academic progress often is slower when students face conflicting work demands. Part-time students have fewer funding

options, a situation that slows their progress even more. Lower-income students at community colleges can take five or six years to complete a two-year program – similar to the average time-to-degree for a four year program – a strong disincentive for enrollment and a significant barrier to completion.

In a cruel paradox, the income that students generate from off-campus work in order to pay for college also decreases their eligibility for need-based financial aid.

Another effect of the rising cost of college coupled with high rates of non-completion is a higher rate of student loan defaults, a financial burden that ultimately falls on the taxpayer.

Financial Need As Access Issue Rather Than Completion?

It is important to note that some researchers and admissions officials believe that financial difficulties are more of a barrier to participation than to completion: students are more likely to decide against applying to college based on financial concerns than they are to discontinue their studies for financial reasons after enrollment.

U.S. Department of Education studies have found that 83 percent of high school graduates whose parents have low levels of income are able to attend 4-year colleges at the same rates as students from middle-income families, if they do what 4-year colleges expect them to do. That is, if they have an academic record and aptitude test scores which demonstrate the minimal qualifications for admission to a 4-year institution, if they take a college entrance examination, and if they submit an application for admission.[56]

In fact, Community College of Philadelphia research suggests that by their second year in college, students noted that financial and personal concerns had less effect on their progress than did the existence of support systems, intellectual challenges in the classroom, external reinforcements about the value of education (e.g., from employers), and positive exchanges with faculty, staff, and peers.[57]

Nonetheless, most studies of adult students show financial need as a major cause of slowing down, perhaps because many adult students pay as they go by taking courses whenever their income allows it.

Academic Preparation

Advanced high school math, science, reading, and AP courses are the most critical academic factors for success in college. The impact on degree completion of a high school curriculum of high academic intensity and quality is far more pronounced, and positively, for African-American and Latino students than it is for whites. Incoming community college students who are prepared to take college-level courses are 50 percent more likely to graduate than those who need remediation. Students who need remediation are twice as likely to drop out of college without completing any credits. Yet the high schools that serve minority students—in Philadelphia's case, most of the city's public high schools—often don't offer AP courses at all.

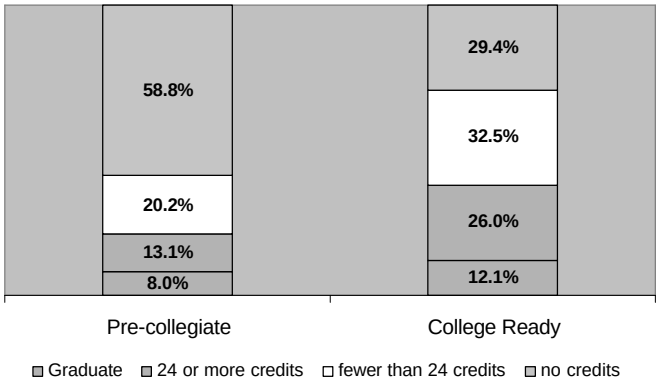
According to U.S. Department of Education researcher Clifford Adelman,[58] finishing a high school course beyond the level of Algebra 2 (e.g., trigonometry or pre-calculus) significantly raises the odds that a student entering postsecondary education will complete a bachelor's degree (83 percent versus 60 percent).

Adelman argues that a calculation of academic resources (the composite of high school curriculum, test scores, and class rank) is a better predictor of college completion than is socio-economic status. Having enrolled in college, students from the lowest two socio-economic quintiles who are also in the highest academic resources quintile earn bachelor's degrees at a higher rate (72.5 percent) than the majority of students from the top socio-economic quintile (about 55 percent nationally, according to Adelman's data). Conversely, students with low academic resources earn degrees at low rates no matter their socioeconomic standing.

The impact on degree completion of a high school curriculum of high academic intensity and quality is far more pronounced, and positively, for African-American and Latino students than it is for whites.

Community College of Philadelphia research shows that incoming students who are prepared to take college-level courses are 50 percent more likely to graduate than those who need remediation. Indeed, as CCP's research shows, students who need remediation are twice as likely to drop out of college without completing any credits.

CCP Student Status at Departure by College-Readiness at Entry, 1999



Student Attrition at CCP: When Students Leave, Why They Leave, and Their Academic Success at Departure. Institutional Research Report #120, Office of Institutional Research, Community College of Philadelphia. June 2001.

A few programs do exist in Philadelphia that effectively prepare high school students at some of the toughest public schools for a successful college experience, but these aid only a few hundred out of the 9,000 students who graduate each year.[59] **For many of Philadelphia's students, community college is the only available path to continued education, and many face one or two years of remedial courses at the community college before starting the college curriculum** – a disheartening proposition for an 18 or 19-year old who has just recently "survived" several years of below par high school education.

Student Attitudes

Recent research at the Community College of Philadelphia indicates that financial and personal concerns have a stronger negative impact on student persistence during the initial semesters at the college. By graduation, however, students reported that financial difficulties and personal concerns had not been significant deterrents to completion. Graduating students reported that they were positively motivated to complete their degree by support from family and friends, a desire to improve socio-economic status for themselves and their family, employer demand for more education, as well as the availability of financial aid. In fact, CCP's research indicates that academically at-risk students who successfully earned a degree were "confidant and determined, possessed clearly defined goals, and a strong desire to complete college and earn a degree."[60]

Adult students may also be apprehensive about their own compatibility with a 4-year college environment and their ability to compete academically against younger students fresh out of high school.

Student persistence and completion are also dependent on effective student engagement. The CCP study finds that positive interactions and experiences nurture better engagement and continued enrollment, while negative interactions foster disengagement and eventual withdrawal from the college.[61] Positive classroom experiences include course content that is transparently relevant to the major and to students' interests, intellectual stimulation, and well-guided, engaged classroom participation. Positive experiences outside the classroom include good interactions with faculty, staff, and advisors, students' perceptions of faculty concern for teaching and for providing opportunities for students to grow and develop, availability of courses, good peer relationships, an inviting institutional culture and facilities, and strong support services such as the library, learning lab, tutoring and workshops, counseling, computer labs, and internships. The study also found that the quality of these institutional experiences is more important than quantity, and the critical experiential juncture seems to be the sophomore, or second, year of college.

Logistics

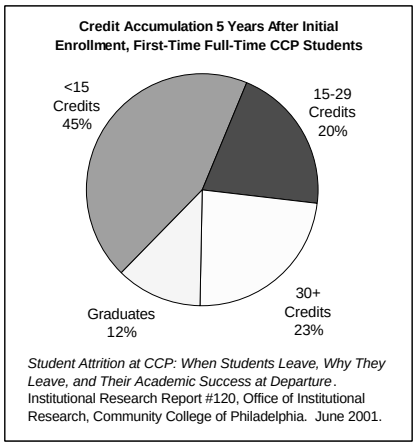
In addition to financial barriers and poor academic preparation, lower-income students, in particular adult students, also face logistical barriers such as work and family conflicts, childcare, housing, and transportation issues. Adult students who are full-time employees tend to identify themselves first as employees and secondarily as students. When work pressures increase, they tend to slow down their studies, or stop them completely. "Life happens" factors demand energy, time, and finances: a broken-down car makes getting to work and school more difficult, a health emergency diverts income away from education, a new baby or failing older relative require more attention and energy, or childcare arrangements fall apart. The location of classes can also be a factor in non-completion, if the logistics of getting to class get too complicated. Community colleges have found that students who take advantage of the availability of courses at more than one location tend to progress faster and graduate at higher rates. Some for-profit institutions are beginning to locate their learning centers near major public transportation hubs, where working adults can easily stop on the way home from work. Online a-synchronic courses are another solution. Class times are yet another barrier. While many colleges have evening classes from 5-8pm, that is prime "family time" when children need to be supervised and put to bed. Surveys of online course activity show peak activity after 10pm.

First Generation Students

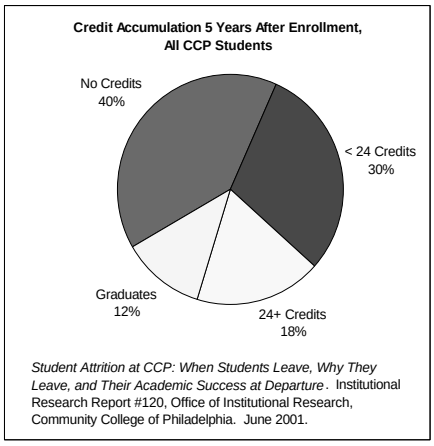
First generation college students are at higher risk of non-completion than are students with college-educated parents: they are more likely to be older when they first enroll in college, they are more likely to enroll in 2-year colleges, attend public rather than private institutions, and have to work more than 20 hours a week while in college – all factors that point to lower completion rates generally.[62] First generation students who start at 4-year colleges are twice as likely as other students to drop out in their first year, probably because of socio-economic barriers – these students are more often from lower-income families (families with college-educated parents tend to have higher incomes.) They may encounter new academic and personal challenges for which they are unprepared. For example: the lack of recognizable role models and support groups, new learning paradigms of independent thinking/learning, intensive reading and writing requirements, time-management, and insecurity about their ability to

succeed. Even when support services do exist for first-generation students, students may not know of them or may not feel comfortable accessing them.[63]

Community College of Philadelphia, however, reports that its full-time, first-time students graduate at the same rates as all CCP students.



Student Attrition at CCP: When Students Leave, Why They Leave, and Their Academic Success at Departure. Institutional Research Report #120, Office of Institutional Research, Community College of Philadelphia. June 2001.



Student Attrition at CCP: When Students Leave, Why They Leave, and Their Academic Success at Departure. Institutional Research Report #120, Office of Institutional Research, Community College of Philadelphia. June 2001.

Age And Campus Supports/Culture

Many 4-year colleges lack programs and services geared to the needs of adult students who are full-time employees at 4-year colleges. Campus culture and the majority of academic and social support programs and services are still predominantly geared toward traditional-age college students (18-24 years old).

Other Factors

Several other factors contribute to the area's low postsecondary attainment level:

- The issue of college completion is practically invisible outside of the postsecondary education community, even to major stakeholders such as prospective students and their families and the business community. Students enter the postsecondary educational system thinking that access is the major challenge, when in reality it is only the first. Attention to non-completion, when it occurs, focuses on "traditional" college students (ages 18-24), but many students fall into the "non-traditional" description: working adults, 25 years and over, who must balance college studies with full-time work and family responsibilities. These students have fewer resources available to them from all sources.
- Even within postsecondary education, not all institutions are equally active and successful in ensuring that all their students complete their degrees. At best, efforts and systems exist to identify at-risk students and help them get back on track. At worst, dropping out is considered a reflection on the individual students who "just can't cut it."
- A local history of strong labor unions, where a college degree was not necessary for obtaining a good job with family-sustaining wages, or for promotion.

Converging Factors

While each of the factors mentioned here can be overcome separately, the combination of several factors can be overwhelming for students. The Education Trust finds that because of poor academic preparation, financial difficulties, first-generation status, and lack of adequate support structures, only 7 percent of enrolled lower-income students complete their degrees versus 60 percent of enrolled higher-income students.[64]

Groups that are especially at risk for non-completion due to multiple attrition predictors are young African-American males and lower-income working mothers. This is the profile of many of CCP's students.

The net effect is an educational system stacked against lower- and moderate-income students. The numbers and factors point not to an epidemic of individual failure to thrive in college, but to a systemic problem. Eighty-thousand adults, aged 25-45 in Philadelphia fall into this category. **With appropriate supports in place, this group could return to school, "make a comeback" in effect, and finish the degree they started.** In some cases, students were not aiming for a degree but took several courses (at least one year's worth) with other goals. It is reasonable to argue that given the worth of a college credential and the amount of effort they have invested in their postsecondary education, they too should be encouraged to obtain a degree.

5. WHO ARE THE COMEBACKERS?

Comebackers are working adults, mostly lower income, working in entry-level or support positions with little job security and few benefits and where upward mobility is dependent on a better education. By definition, all Comebackers have some college experience, typically at a community college, but for a variety of reasons were not able to complete a degree; some took courses without fully realizing they could attain a degree. Many are heads of families and shoulder other adult responsibilities. Most lack social and financial safety nets, and their lives are susceptible to the chaotic disruptions typical of the working poor: a health emergency, broken down car, or housing crisis can interrupt their studies for months or years. Yet, a college degree could provide exactly the economic boost to insulate them from future disruptions as well as set a family precedent for attending college.[65]

Until now, they have been a largely invisible population. While many programs exist for traditional 18-24 year-old students, few, if any, concerted efforts exist for this Comebacker group. Yet they promise the quickest and most effective way to increase our stock of college-educated workers:

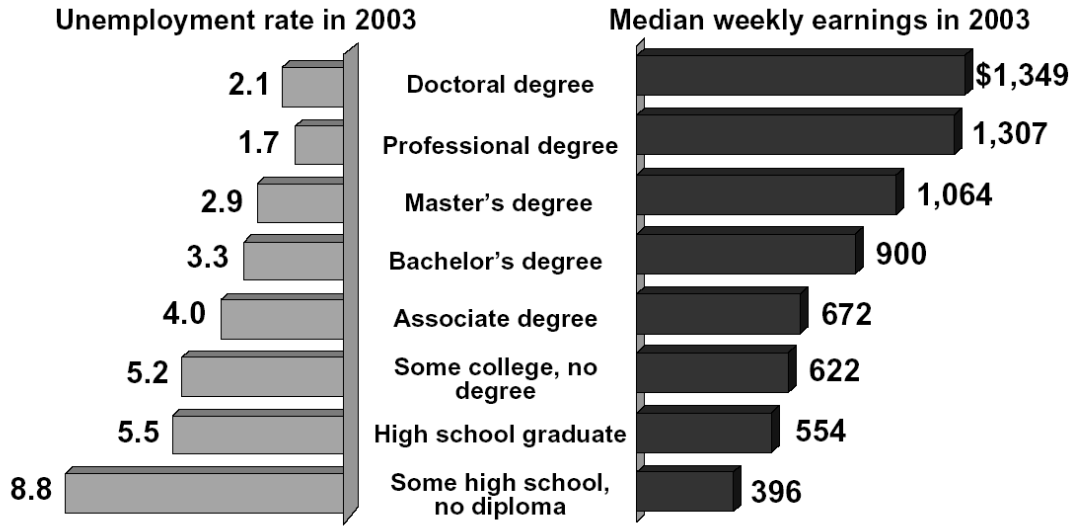
- Since most seek an associate's degree, they would provide the critical backbone for Philadelphia's industries, supporting health, office, and computer services.
- They have proven that they have initiative and drive by investing time and money in college courses.
- They are at the prime of their working lives and could have 20 to 40 or more productive working years during which they could benefit from a college degree.
- They are committed to staying in Philadelphia: 97 percent of Community College students continue to live and work in the city after graduation.
- All things being equal, e.g., finances, time for studying, adult students tend to complete courses at higher rates (75 percent) than do younger students (61 percent), and some research indicates that under the right conditions, adult students get better grades.[66]

Investing in Comebackers would impact several generations at once. As heads of households, not only do they provide for the economic health of their children and grandchildren, but they also are role models for good learning habits and educational motivation.

6. HOW BIG IS THE PAYOFF?

For Individuals

Average salaries rise sharply as an individual's postsecondary educational attainment increases. Higher education levels are also associated with lower unemployment:



NOTES: Unemployment and earnings for workers 25 and older, by educational attainment; earnings for full-time wage and salary workers

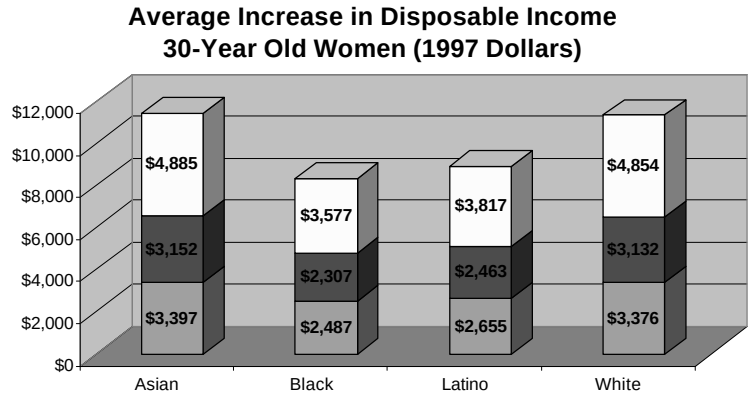
Source: Bureau of Labor Statistics

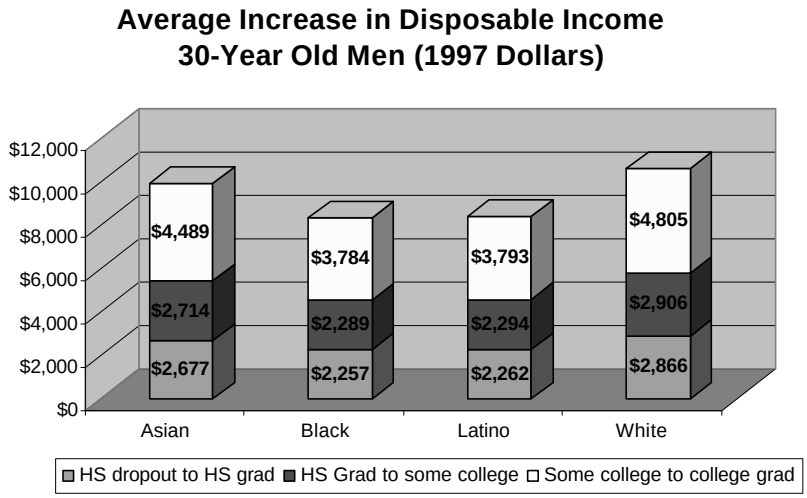
The biggest rewards come with a 4-year college degree because it doubles an individual's earnings compared to the earnings of a high school graduate. This translates on average into over $1 million in additional lifelong earnings. A 4-year college degree is worth an additional 45 percent in earnings potential over a two-year degree, and an additional 73 percent compared to the earnings potential of a college dropout.

An associate's degree increases earnings potential by 35 percent compared to a high school diploma, and 20 percent more than the earnings potential of a college dropout. In Philadelphia in 2003, the average salary of a community college graduate increased from $30,000 to $39,000 in the first year post-graduation.[67]

A college degree offers better **career control** – the ability to find jobs, develop professionally, choose career directions, and better resilience when the economy is bad. A college degree today is the single most important key to moving out of what has been termed the "working poor" and into the American middle-class.

Disposable income shows even more dramatic economic rewards connected to postsecondary education. Disposable income doubles for people who have some college education versus those who have only a high school diploma, and increases by a further 150 percent for women with the completion of a postsecondary credential, and by 166 percent for men with a postsecondary credential.





Data Source: Closing the Education Gap: Benefits and Costs, Rand Education 1999. Based on the US Census Survey of Income and Program Participation (SIPP).

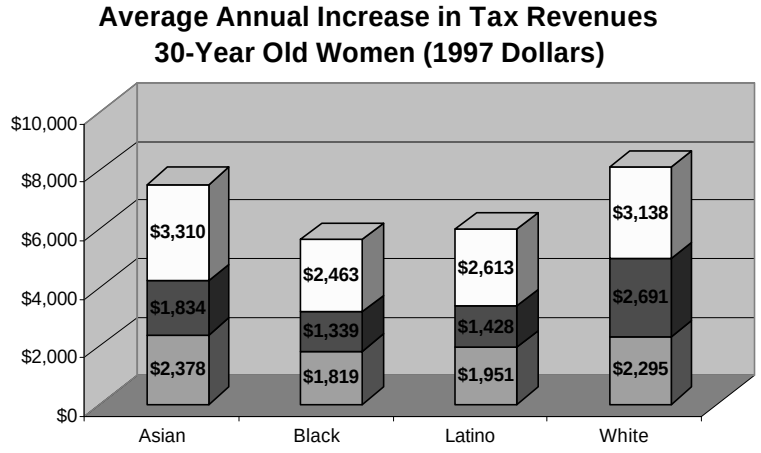
Less tangible benefits: Whereas 50 years ago individuals could expect to retire from the company that hired them when they graduated from high school, we now expect to work for 7-8 different employers over the span of our working life. A college education provides the broad skills that allow people to find jobs even in faltering markets: knowing how to learn and how to adapt to new situations and new technologies.

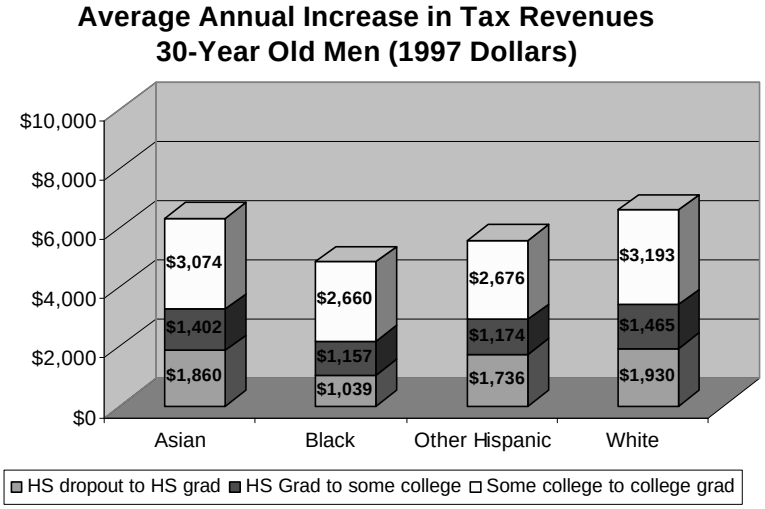
Will there be jobs for the newly credentialed? According to Pennsylvania Department of Labor and Industry projections, Philadelphia will require 12,500 more workers with college degrees by 2010. The greatest need will be for people with associate's degrees in occupations that are the core of area industries: information technology specialists, allied health workers, engineering and pharmaceutical technicians, and general office support staff. In fact, these projections show a 31 percent increase in demand for workers with associate's degrees, versus a

22 percent increase in demand for workers with baccalaureate degrees, and a 12 percent increase in demand for workers with only a high school diploma.

For Cities, Regions, and States

Taxes: Higher educational attainment means a stronger tax base and stronger investment in the community. College grads are more likely to own their homes than residents with only a high school diploma, and tax revenues from college graduates are threefold those from residents with only a high school diploma.



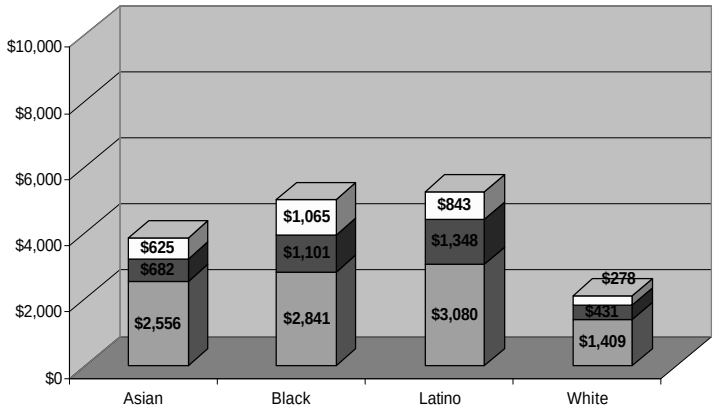


Data Source: Closing the Education Gap: Benefits and Costs, Rand Education 1999. Based on the US Census Survey of Income and Program Participation (SIPP). Numbers for Federal Taxes and California State Taxes.

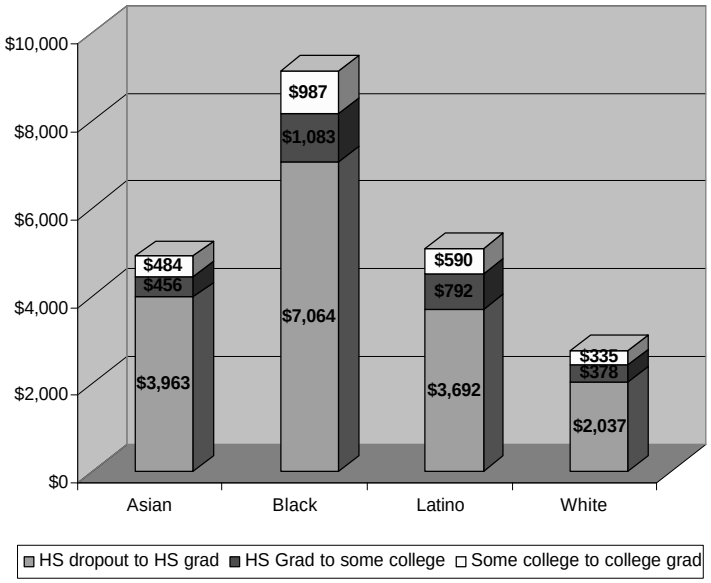
Social Services: A high school dropout or a high school graduate with no college degree typically costs the taxpayer more than he or she contributes to the tax base over the course of a lifetime. Having some college education more than halves public assistance expenses for an

individual, and completing a college degree all but eliminates them. (Public assistance expenses include unemployment benefits, food stamps, school breakfast and lunch for children, food stamps, SSI, low-income home energy assistance programs, Medicare, and Medicaid.) For men, especially African-American and Latino men, the largest savings component is in criminal justice costs.

Average Annual Savings to Public Social Program Costs
30 Year-Old Women (1997 Dollars)



Average Annual Savings to Public Social Program Costs, 30 Year-Old Men (1997 Dollars)



Data Source: Closing the Education Gap: Benefits and Costs, Rand Education 1999.
Based on the US Census Survey of Income and Program Participation (SIPP).
Numbers for Federal Taxes and California State Taxes.

Intangibles: Better-educated residents tend to participate more in the community. They are more civically engaged, more likely to vote, to be active in the local community and their children's schools, to volunteer, and to contribute to charities, and are less likely to consume social services or to commit violent crimes. Their children are more likely to attend college than children of parents with no college education, particularly in lower-income brackets.

For Businesses

College-educated adults are valued employees because a degrees is viewed as a proxy for knowing how to learn; adapting to and adopting new technologies and changes in the business environment; identifying and solving complex problems; thinking critically and creatively; being scientifically, mathematically, and historically literate; and having good written and oral language skills.

While businesses can relocate upper-level employees, entry level and support positions are typically filled locally and increasingly by workers with associate's degrees and other postsecondary credentials. Comebackers fill these positions. They are the backbone of our businesses, and they stay in Philadelphia's workforce after they graduate. Nearly all of Community College of Philadelphia's students work in the city after graduation, compared with 64 percent of graduates from 4-year colleges.

7. CONCLUSIONS

Philadelphia, the 7th poorest of the 100 largest cities in the U.S., according to a Brookings Institution survey,[68] cannot afford for 80,000 of its residents—adults in the workforce who have already invested significant time and resources in their postsecondary education—to not complete a degree, both to their own benefit and the contribution they will make to the city and the workforce. Getting these residents to complete their degree will have a tremendous impact on the quality of the workforce, the city's tax base, its ability to compete in the global economy, not to mention the economic health of tens of thousands of the city's residents and their children and children's future.

If 10,000 Comebackers completed their college degrees by the end of the decade:

- City tax revenues would increase $3.96 million in the first year, and $273.2 million over 30 years
- Purchasing power would increase $35 million in the first year, and $1.05 billion over 30 years, not counting potential salary increases
- Social service expenditures would save up to $10 million in the first year, and $300 million over 30 years.[69]

To date there have been no comprehensive, city- or region-wide attempts to increase postsecondary educational attainment levels.

IT IS TIME FOR CHANGE!

A comprehensive solution in Philadelphia should focus on creating an environment that attracts new businesses and higher-income residents, but such efforts must go hand in hand with attention to existing businesses and residents, specifically boosting the earnings potential of lower-income center city residents.

It is time to deal with the integrity and shape of the postsecondary pipeline and to increase the number of employees who have completed associate's degrees as well as baccalaureates. As an added bonus, an investment in increasing college completion rates will directly affect efforts at the two ends: recruitment will be easier if students know they have a good chance of graduating and recouping the significant financial and time investment of attending college, and good retention strategies create strong relationships between students and local businesses and communities, positively influencing graduates' decisions to stay in the area after graduation. Indeed, "Should I Stay or Should I Go," a recent Knowledge Industry Partnership report[70] finds that 86 percent of graduates originally from the region remain in the area after graduation, compared with 25 percent of students who came here to attend one of the region's colleges. Increasing the number of native-born grads, therefore, is the fastest and surest way of increasing the educational attainment level of the area's workforce.

It is time to change the traditional approach to educational attainment, which places the burden of completion solely on individual students and postsecondary institutions. Businesses, local government, non-profits, and community organizations must claim their stake in the education of our workforce and with it responsibility. Colleges and businesses have long benefited from partnering in advanced research and technology transfer. It is now time for focusing on the issue of degree completion: the cost of not attending to it is simply too high.

Graduate! Philadelphia is the voice for this change. Our goal is to develop an agenda and action plan for upgrading Philadelphia's human capital through postsecondary education.

Formed by the Pennsylvania Economy League and the Philadelphia Workforce Investment Board, **Graduate! Philadelphia** is a joint regional approach to strategy development on postsecondary degree completion, highlighting this as a critical and integral component of efforts to raise educational attainment levels. **Graduate! Philadelphia** promotes and supports the work of local partnerships and institutions, and provides a national model for regional economic development approaches to educational attainment.

This work will link employers' requirements to postsecondary education, and education to economic development in the region. In so doing it will bring together in a deliberate and strategic way stakeholders that have collaborated only sporadically and opportunistically in the past, if at all. Through careful attention to the work outlined here and to projecting and celebrating our accomplishments both regionally and nationally, **Graduate! Philadelphia** will promote the new competitiveness of Southeast Pennsylvania's workforce and position the region as a bold and innovative leader in human capital development.

Graduate! Philadelphia's models for Comebacker degree completion can make Philadelphia stand out among cities and regions in its own "come back" strategy. It is the right thing to do for our residents. It is the smart thing to do for business. And, it is the best way to position the region as a bold and innovative leader in human capital development.

8. GRADUATE! PHILADELPHIA'S RECOMMENDATIONS

1. Set an expectation for a postsecondary degree for all.

2. Recognize that non-completion is a major problem, and we are all responsible for it. Commit to developing an agenda and legislative action including a multi-year strategic plan, awareness raising efforts, a policy plan, and demonstration programs. All should include evaluation mechanisms and financial support. Ensure that all stakeholders are enlisted and engaged: secondary and postsecondary educators, students and their families, policy-makers, education, business, labor, and government.

3. Recognize the untapped potential of the 80,000 who have some college experience, by getting them to degree completion. These are working adults, most of them lower-income, who have made significant sacrifices to start college, but at present cannot benefit from the rewards of a college degree nor "recoup" their investment. Such a step will quickly result in new work-ready graduates.

> Target those who have at least one year's worth of credits and have proven themselves academically.
>
> An outreach campaign could channel Comebackers to a college re-engagement center where they would receive individual academic, financial, career, and logistical counseling for finishing a degree in a timely manner.

4. Create appropriate support structures for adult students:

- Offer amnesties on expired credits.
- Recognize work-based learning experiences toward degree credit.
- Direct more financial assistance in the form of subsidies toward lower-income students to counter the prevailing financial aid trends of tax credits/incentives and loans that disadvantage this population. Develop financial aid packages for less than half-time students, recognizing that half of all college students are over 25 years of age and have a different set of responsibilities and needs than 18-24 year-olds, including heavier work loads and family obligations that force them to enroll part-time.
- Offer flexible scheduling: extended evening and condensed weekend courses, courses that start more often than once a semester, several time-slots per module/assignment, opportunities for group-discussions and sessions with the instructor, online/blended courses (provide support for students who have not previously taken online courses or do not have home access to a computer or who are computer illiterate.)
- Work with employers to provide adequate tuition reimbursement and create workweek accommodations to allow time for courses (expanded or condensed week; flexible hours; time off with pay for classes.)

5. Develop state-wide requirements for postsecondary institutions and put special emphasis on programs that accommodate the needs of working adult students. Community Colleges are the primary gateway to postsecondary education for adult students, but we need more fluidity across levels of education so that they don't become the end post for students.

- Mandate more 2+2 alignment and transfer programs between community colleges and 4-year institutions to allow smooth transitions for students seeking a 4-year degree and to minimize the number of credits lost when a student transitions to a 4-year degree.

- Mandate fluid and flexible cross-institutional curricular alignments and reimbursement practices to allow students to take courses at multiple campuses that are geographically convenient to their work or place of residence.

- Develop curricular alignment with the secondary education system so that high schools can prepare students for the content and types of learning they will need in order to succeed in college.

- Increase state funding for community colleges.

- Improve reporting of student achievement and track student achievement across levels of education.

6. Provide incentives and rewards for businesses that encourage and support their employees in getting college degrees. Support systems include tuition reimbursement but also flextime (extended or condensed workweeks, paid time off for classes, extended lunch hours), public recognition of achievements, mentoring/counseling, etc.71 It is in our best interest to keep such forward-looking companies in the city.

7. Provide employer and college incentives for students to return to school: e.g.,, flexible work schedules, clearer tuition reimbursement policies. Flexible scheduling and course programming: late evening and weekend courses, courses that start more often than once a semester, several time-slots per module/assignment, opportunities for group-discussions and sessions with the instructor, online/blended courses; amnesty expired credits, waive readmission fees, offer bookstore vouchers, child-care, and transportation assistance; package existing credits to count toward a degree; recognize work-based learning experiences; create a more flexible application process for PHEAA.

8. Connect college completion programs to Job-Ready PA (Governor Rendell's workforce agenda in the FY2006 budget). College completion programs for the working-adult population can quickly impact our economy and thus maximize the impact of tax dollars invested in raising the educational levels of our workforce. While Job-Ready PA currently addresses the preparation of high school students for immediate entry to college, the reality is that many lower income students delay their entry to college until they are in their twenties or later, and for many the main barriers arise not at the start of college but after enrollment: getting to completion. Since many of these degree-less former students are already in the workforce, an investment in completing their education will have an immediate, direct impact on our economy.

These recommendations are also designed to "filter down" to affect Philadelphians and college education in the area more broadly.

APPENDIX

This is a list of local programs that promote college preparation, access, and retention for Philadelphia public school students:

A Better Chance is a national organization that refers students in 6th through 11th grades to colleges nationwide to be considered for placement and financial aid. Students receive academic support services and are provided with college prep information while they are still in high school. (Prep, Access)

AES/PHEAA (American Educational Services/Pennsylvania Higher Education Assistance Agency). AES/PHEAA offers information on postsecondary scholarships and financial assistance available for Pennsylvania residents. (Financial information/planning tools)

Brook J. Lenfest Scholarship Program provides financial aid to low-income students to attend the Pennsylvania State University. Eligible students must be past White-Williams Scholars, participants in Philadelphia Futures, or graduates of Mastery Charter High School. (Financial Aid)

College Access Program (CAP) – Philadelphia Education Fund. Three centers in West, North, and Center City Philadelphia serve college-bound individuals from the community. The program provides guidance and access to college reference materials, computer labs, financial aid and scholarship information, "virtual" campus tours, and standardized testing information for over 8,000 students and city residents each year. The College Access Program also operates at middle and high schools around the city, providing college readiness services including college and career workshops, individual advising, motivational speakers, and information on scholarships and financial aid. (Prep)

CORE Philly (College Opportunities Resources for Education.) A city-wide initiative providing "last-dollar" scholarships for Philadelphia high school graduates entering college. Founded by Congressman Chaka Fattah in collaboration with Philadelphia Mayor John F. Street, School District of Philadelphia CEO Paul Vallas, Philadelphia City Council members and School Reform Commissioners.

Eastern University – Lamberton High School. According to the Early College High School model being considered, graduates of Lamberton HS will receive college credit at Eastern University. (Prep, Access, College Credit)

Education Opportunity Centers (funded by the Federal TRIO programs) provide counseling for Philadelphians aged 19 and up who are interested in going to college. Services focus on review of college options and assistance in locating financial aid. Two counselors at each of two locations are expected to serve 2,000 clients each year. The Pennsylvania State University runs one center in Center City, and the University of Pennsylvania runs the other center in West Philadelphia. (Information, Counseling)

Educational Advancement Alliance. After-school and Saturday programs focused on academic enrichment and college preparation; college visits and peer support groups. (Prep)

The Ellis Trust (operated by White-Williams). Grants to girls in grades 9 to 12 from single parent families who are in need of aid to complete their high school education. Grant money can be used toward tuition, tutoring, college visits, college application and entrance test fees, college courses, visual and performing arts lessons, and more. (Financial Aid)

GEAR UP (Gaining Early Awareness and Readiness for Undergraduate Programs) a federal program operated by the School District of Philadelphia. College preparation and awareness programs for 6th through 12th grade students in low-income communities. GEAR UP provides academic enrichment, mentoring, and college guidance services. (Prep)

LEAP, operated by the Free Library of Philadelphia. LEAP provides homework assistance, computer literacy, library skills and multicultural enrichment activities for elementary and secondary school students during the school year. High school students participating in LEAP can apply for paid internships at local Free Library Branches. Interns can participate in Saturday trainings in leadership, life skills, and college and career readiness. (Prep)

Lincoln University's Step-To-College program focuses on a whole high school rather than on a select group of students. This is a new partnership between Lincoln U. and Overbrook HS. Its goal is to increase the number of Overbrook students who apply to Lincoln U. The program is designed to integrate cultural and academic enhancement activities into Overbrook's curriculum. The program emphasizes academic rigor, mentoring, dual enrollment options, college and SAT prep, and it has a parental component. (Prep, Access)

LULAC National Educational Service Centers. A national network of educational centers located in cities across the United States and Puerto Rico. LNESC of Philadelphia is a local operator of the federally funded Talent Search program that encourages high school students to apply for college. LNESC also offers academic enrichment, career exploration, and college access services to Latino youth. (Founded and operated by the League of United Latin American Citizens (LULAC). (Prep)

The Pennsylvania State University's Philadelphia Community Recruitment Center provides information on the Penn State network of undergraduate campuses, assistance in completing admissions and financial aid applications, counseling, and information on special programs. The Center also sponsor bus trips to Penn State campuses. (Information, Counseling)

Philadelphia Futures prepares students from low-income families to enter and succeed in college by providing mentoring, academic enrichment, college guidance, and financial incentives starting in 9th grade through the end of college. Thirty to forty students are served each year. (Prep, Access, Retention)

Rosemont College's RISE program for girls at Bartram, Overbrook, University City, and Olney High Schools. Uo to 100 girls in grades 9-12 are selected each year to participate in intensive academic and social enhancement activities aimed at improving their chances of going to college. Activities include literacy classes, intensive summer academic overnight camps on the Rosemont campus, college prep, SAT prep, cultural exposure (students go to cultural events and activities in the area, e.g., opera, theatre), professional development training for the high school teachers and counselors, parental involvement and encouragement to support the girls, financial aid education for parents and students. Participating students compete for four 4-year fully paid scholarships to Rosemont College each year. Outcomes: the first class of Rosemont students graduated this year with 100 percent retention. High school completion rates are in the mid 90 percent range, and all participating students to date have been accepted to college. All have enrolled. (Prep, Access, and Retention)

Say Yes To Education. Financial and academic support for approximately 50 students in 10-year cycles. The program provides academic enrichment and college prep services, and guarantees participants college tuition. The first cohort included 69 6th graders at Belmont

Elementary School. The second cohort, in 1990, included 58 3rd grade students at Harrity Elementary School, and the third cohort was started in 2000 with 50 3rd graders at Bryant Elementary School. (Prep, Financial Aid)

White-Williams Scholars. Monthly stipends to high achieving, low-income Philadelphia public high school students as long as they maintain A's and B's in their classes. Students also benefit from college preparatory counseling, college trips, and peer support groups. (Prep)

The YMCA Achievers Program offers career mentoring and academic enrichment programs for teens in 7th through 12th grades. The program meets at Drexel University on the first and third Saturdays of the month between September and June as well as periodically at the neighborhood YMCA branches. (Prep)

NOTES ON METHODOLOGY

This research focuses on the City of Philadelphia rather than on the Greater Philadelphia region, because Comebackers typically live and work in the city, rely on city services, and contribute to the city's tax base. Accordingly, comparisons with other major cities focus on the cities cited, excluding their metropolitan areas.

Educational attainment rates were estimated using county figures from the 2000 Census and from the 2003 American Community Survey.

Institutions of higher education were identified by location (within a 25 mile radius of Philadelphia), whether they are public or private, and whether grant baccalaureate or associate's degrees. National and local data on college enrollment and graduation rates were compiled from the National Center for Education Statistics (NCED) Integrated Postsecondary Education Data System (IPEDS) specifically, "enrollment" and "completions" data, for 2003, the most recent year for which data was available. Four-year college cohorts started in 1997 to assess completion six years from enrollment, two-year college cohorts started in 1998 to assess completion five years from enrollment.

All data and analysis sources are noted in the text and endnotes.

Approximately forty interviews inform this research. These were conducted in the fall of 2004 with local and national leaders in business, secondary and postsecondary education, workforce development, economic development, and adult education and training.

ENDNOTES

[1] Eighty thousand is the number of Philadelphians age 25-45 who started a college course of study (i.e., took more than a random course here and there) but did not earn a degree.

[2] A system for tracking the postsecondary education paths of Philadelphia's high school graduates is under development by a local consortium. However, initial indications show that there is tremendous disparity between college going rates of students from higher income families (85 percent, nationally) and those from lower income families (53 percent, nationally) and between graduates of private and public high schools.

[3] This average has wide ranging data points. Similar to college access, degree completion is also closely correlated with family income, with lower income students graduating at less than half the rate of higher income students.

[4] It is hard to differentiate, except in the long term, whether a student stopped out – interrupted course-taking for a short period of time with the full intention of returning to complete the degree, or dropped out without intention of attaining a degree. Swirling—changing colleges, seeking courses online or in locations convenient to home or work—presents a challenge in tracking Post-25ers and can be problematic for accumulating credits toward a degree.

[5] There is often tension between the social mission of a college and its "bottom line" needs.

[6] Carey, Kevin. (2004). *A Matter of Degrees: Improving Graduation Rates In Four-Year Colleges and Universities*. The Education Trust. Washington DC.

[7] The College Board's report "Trends in College Pricing 2003" found that over a 10-year period ending in 2003-04, average tuition and fees rose 47 percent at public 4-year colleges and universities and 42 percent at private colleges. Community College of Philadelphia, along with other Pennsylvania public two-year colleges, saw slightly lower tuition hikes, but CCP is still more expensive than community colleges in most other states. The current maximum for Pell grants, $4,050, covers only a third of average tuition at a public institution, compared to nearly 85 percent of tuition when the program was initiated three decades ago. State funding in Pennsylvania through the Pennsylvania Higher Education Assistance Agency (PHEAA) provides up to $3,300 per student per year. PHEAA grants are pro-rated for half-time students, but many community college students study less than half time.

[8] Graduation rates at two-year colleges are harder to measure. Many students take occasional courses with no intention of completing a degree, and the "open access" status of community colleges, which means that anyone can enroll, means also that these institutions deal with more inadequately prepared students than do other higher education institutions – students who may not persist beyond one or two courses.

[9] Students who start at a community college and then transfer can take over eight years to complete their bachelor's degree.

[10] All apply to college access as well and the cost of college in particular is a big deterrent for many lower-income students who may qualify for more financial aid than they expect.

[11] Children of parents with college degrees are more likely to attend college themselves than children of parents who do not have college degrees.

[12] Hagedorn, Linda Serra (2005). "Square Pegs: Adult Students and Their "Fit" in Postsecondary Institutions," in *Change: The Magazine of Higher Learning.* January/February 2005. American Association for Higher Education.

[13] *The Economic Impact of Community College of Philadelphia*, Institutional Research Report #140, Office of Institutional Research, Community College of Philadelphia. October 2004.

[14] Rand Education 1997 report for California.

[15] According to Rand Corporation estimates that disposable income increases $3,500 for a 30-year old African-American woman head of household who completed a college degree in California in 1997. The same study estimates a savings in public social services of $3,500 per year for each 30-year old African-

American woman head of household who completed a college degree in California in 1997. From Vernez, Georges, Richard A. Krop, and C. Peter Rydell (1999). *Closing the Education Gap: Benefits and Costs*. Center for Research on Immigration Policy. RAND Education.

[16] For a list of 17 good support practices, developed by Jobs For the Future, see www.workforceadvantage.org). The Council for Adult and Experiential Learning describes nine exemplary practices in employee learning at www.cael.org.

[17] Carnevale, Anthony, and Donna M. Desrochers (1999). *Getting Down to Business: Matching Welfare Recipients' Skills to Jobs That Train*, Educational Testing Service, Princeton, NJ.

[18] Pennsylvania Economy League internal memo, November 21, 2001 on "Initial Analysis of the Greater Philadelphia Knowledge Region."

[19] http://www.kiponline.org/survey.pdf. Released June 2004 by the Knowledge Industry Partnership.

[20] *Philadelphia In Focus: A Profile from Census 2000,* A Report from the Living Cities Series, The Brookings Institution Center on Urban and Metropolitan Policy. 2003.

[21]Bureau of Labor Statistics, www.bls.gov, and the Pennsylvania Department of Labor and Industry http://www.dli.state.pa.us/landi.

[22] *Flight or Fight: Metropolitan Philadelphia and its Future*, The Metropolitan Philadelphia Policy Center and the Pennsylvania Economy League. September 2001. www.metropolicy.org.

[23] Berube, Alan and Tiffany Thacher (2004). *The Shape of the Curve: Household Income Distributions in U.S. Cities, 1979–1999*. Brookings Institution Report, August 2004. http://www.brookings.edu/dybdocroot/metro/pubs/20040803_income.pdf.

[24] Source: US Census 2000 QuickTables, Ed Attainment, associate's and bachelor's degrees.

[25] Source: US Census 2000.

[26] This and the following two bullets rely on information aggregated from the Philadelphia School District's reporting, on its website: saa.phila.k12.pa.us/tafs/high_schools.taf (The research was done in September and October, 2004. Individual school information is no longer available here) and the Philadelphia Inquirer's database of school achievement inquirer.philly.com/specials/2005/report_card/.

[27] Educational Attainment in the United States: 2003, US Census Bureau, Current Population Reports, June 2004.

[28] Calculated from information aggregated from the Philadelphia School District's reporting, on its website: saa.phila.k12.pa.us/tafs/high_schools.taf (The research was done in September and October, 2004. Individual school information is no longer available here) and the Philadelphia Inquirer's database of school achievement inquirer.philly.com/specials/2005/report_card/.

[29] www.philsch.k12.pa.us/offices/declaration.

[30] Measuring Up 2004: A National Report Card on Higher Education, by the National Center for Public Policy on Higher Education. Released 9.15.2004.

[31] http://nces.ed.gov/ipeds./cool/search.asp.

[32] "College-qualified" is a term based on US Department of Education factors such as high school curriculum, grades, class rank, and test scores.

[33] Fitzgerald, B. K. & Delaney, J. A. (2002). Educational opportunity in America. In D. E. Heller (Ed.) Condition of Access: Higher Education for Lower Income Students (pp. 4-24). Westport, CT: American Council on Education and Praeger Publishers.

[34] Astin, A. W., Oseguera, L., Sax, L. J., & Korn, W. S. (2002). *The American freshman: Thirty-five year trends.* University of California, Los Angeles: Higher Education Research Institute, Graduate School of Education & Information Studies, and Heller, D. E. (2001). Trends in the affordability of public colleges and

universities: The contradiction of increasing prices and increasing enrollment. In D. E. Heller (Ed.), *The States and Public Higher Education Philosophy* (pp. 11-38). Baltimore, MD: The Johns Hopkins University Press.

[35] Ticket to nowhere: The gap between leaving high school and entering college and high-performance jobs. (1999). The Education Trust and http://nces.ed.gov/programs/coe/2002/section3/tables/.

[36] US Census 2000 data.

[37] Adelman, Clifford (2000). Postsecondary Attainment, Attendance, Curriculum, and Performance Selected Results From the NELS:88/2000 Postsecondary Education Transcript Study (PETS). US Department of Education, 2000. Downloaded from http://nces.ed.gov/pubs2003/2003394.pdf.

[38] Adelman, Clifford (1999). Answers in the Toolbox: Academic Intensity, Attendance Patterns, and Bachelor's Degree Completion. U.S. Department of Education. Office of Educational Research and Improvement.

[39] US Department of Education "Access to Postsecondary Education for the 1992 High School Graduates."

[40] *Student Attrition at CCP: When Students Leave, Why They Leave, and Their Academic Success at Departure*. Institutional Research Report #120, Office of Institutional Research, Community College of Philadelphia. June 2001.

[41] *Transfer Outcomes of 2002 Graduates and Non-Graduate Former Students*, Institutional Research Report #134, Office of Institutional Research, Community College of Philadelphia. December 2003.

[42] *2003 Institutional Effectiveness Report*, Institutional Research Report #136, Community College of Philadelphia. Office of Institutional Research. February 2004.

[43] Upcraft, M. Lee and Jennifer L. Crissman (1999). What we know about students and how they learn. In M. Stuart Hunter and Associates. *Solid foundations: Building success for first-year seminars through instructor training and development.* (Monograph No. 29) (pp. 25-38). Columbia, SC: University of South Carolina, National Resource Center for the First Year Experience and Students in Transition.

[44] The most notable national initiatives are: "Opening Doors," is an MDRC initiative with community colleges in several states to design and implement new types of financial aid, enhanced student services, and curricular and instructional innovations, with the goal of helping nontraditional students earn college credentials as the pathway to better jobs and further education. For details see www.mdrc.org. The Lumina Foundation also has several programs with community colleges across the country. For details see www.luminafoundation.org. Jobs For the Future has reported on promising practices at four colleges and together with the National Council for Workforce Education will roll out "Breaking Through: Building Effective Pathways to College Degrees" in Summer 2005. For details see www.jff.org.

[45] *Should I Stay or Should I Go? Survey of Recent College Graduates.* Knowledge Industry Partnership report, June 2004. http://www.kiponline.org/survey.pdf.

[46] *The Economic Impact of Community College of Philadelphia*, Institutional Research Report #140, Office of Institutional Research, Community College of Philadelphia. October 2004.

[47] Carey, Kevin. (2004). *A Matter of Degrees: Improving Graduation Rates In Four-Year Colleges and Universities*. The Education Trust.

[48] http://measuringup.highereducation.org/survey.cfm. Published by the National Center on Public Policy and Education. Published September 2004.

[49] Measuring Up 2004: A National Report Card on Higher Education, by the National Center for Public Policy on Higher Education. Released 9.15.2004.

[50] Low-income is defined as $0-$24,000/year; moderate-income as $25,000-$49,000/year; higher-income as $50,000-$74,999/year, and highest-income as $75,000 and above.

[51] The late Stanford anthropologist John Ogbu has suggested that Blacks in particular tend to focus less that Whites on postsecondary education as a means and measure of success. Black Americans, he argued, live a kind of paradox. They are expected to work as hard as Whites at the same type of jobs, but for fewer rewards. As a result of this paradox, Blacks have chosen not to work as hard as Whites in an effort to reduce the dissonance about expending effort for incommensurate rewards. The flipside of the same coin, Ogbu asserted, is that this lack of effort on the part of Black Americans feeds into folk theories that Whites already hold about Black intellectual and cultural inferiority. Ogbu extended his "cultural-ecological" model to Black academic underachievement: Blacks have been systematically prevented from taking full advantage of the American educational system. Because of their geographic location: both rural and inner city, they typically receive an inferior education in K-12 which precludes opportunities for higher education and high status jobs. This, and other social and economic hardships, leads them to abandon their educational efforts earlier than Whites. Ogbu's contended that after generations of such treatment, Blacks have chosen not to compete for scholastic rewards, preferring other means of attainment. They adopted alternative strategies within a limited opportunity structure to reduce their anxiety about school achievement. These strategies lead to school failure and exclusion from high status jobs and other social rewards. Ogbu further argued—to much criticism—that the dominant group (Whites) uses certain mechanisms to encourage school failure among low-income Blacks, who in their distrust of the dominant structure, have developed behaviors and attitudes (blaming the system, client-ship, and hustling, for example) that are incompatible with those required for school success.

Ogbu, J. U. (1978). Minority education and caste: The American system in cross-cultural perspective. New York: Academic Press.

Ogbu, J. U. (1981a). *Education, clientage, and social mobility: Caste and social change in the United States and Nigeria*. In G. Berreman (Ed.), Social inequality: Comparative and developmental approaches. New York: Academic Press.

Ogbu, J. U. (1981b). Origins of human competence: A cultural-ecological perspective. Child Development, 52, 413-429.

Ogbu, J. U. (1982). *Cultural discontinuities and schooling.* Anthropology and Education Quarterly, 13, 290-307.

Ogbu, J. U. (1985). *A cultural ecology of competence among inner city Blacks*. In M.B. Spencer, G.K. Brookins, & W.R. Allen (Eds.), Beginnings: The social and affective development of Black children (pp.45-66). Hillsdale, NJ: Lawrence Erlbaum Associates.

[52] Herold, Benjamin, (2003). *Regional College-Going Patterns of Philadelphia Public High School Graduates: The Role of High School Curriculum*, in Penn GSE Perspectives on Urban Education, Volume 2, Issue 2 Fall 2003. **www.urbanedjournal.org/articles/article0013**.

[53] Ifill, Roberto M. and Michael S. McPherson (2004). *When Savings Means Losing: Weighing the Benefits of College-Savings Plans*. The Lumina Foundation New Agenda Series.

[54] Davis, Jerry S. (2003). *Unintended Consequences of Tuition Discounting*. The Lumina Foundation New Agenda Series.

[55] Adelman, Clifford (1999). Answers in the Toolbox: Academic Intensity, Attendance Patterns, and Bachelor's Degree Attainment. U.S. Department of Education, Office of Educational Research and Improvement.

[56] Adelman, Clifford (2003). Postsecondary Attainment, Attendance, Curriculum, and Performance. Selected Results from the NELS:88/2000 Postsecondary Education Transcript Study (PETS), 2000. US Department of Education.

[57] *Beating the Odds: Reasons for At-Risk Students Success at CCP*. Institutional Research Report #93, Office of Institutional Research, Community College of Philadelphia. September 1997.

[58] Adelman, Clifford (1999). Answers in the Toolbox: Academic Intensity, Attendance Patterns, and Bachelor's Degree Attainment. U.S. Department of Education, Office of Educational Research and Improvement.

[59] E.g. Philadelphia Futures' Sponsor-a-Scholar program; White-William Scholars; Say Yes to Education.

[60] *Beating the Odds: Reasons for At-Risk Students Success at CCP*. Institutional Research Report #93, Office of Institutional Research, Community College of Philadelphia. September 1997.

[61] *Beating the Odds: Reasons for At-Risk Students Success at CCP*. Institutional Research Report #93, Office of Institutional Research, Community College of Philadelphia. September 1997.

[62] Beginning Postsecondary Student Longitudinal Study: 1996-2001. NCES, U.S. Department of Education. 2003.

[63] *Students Whose Parents Did Not Go To College: Postsecondary Access, Persistence, and Attainment.* Findings from The Condition of Education 2001, NCES 2001–126. National Center for Education Statistics, U.S. Department of Education. 2001.

[64] Carey, Kevin. (2004). *A Matter of Degrees: Improving Graduation Rates In Four-Year Colleges and Universities*. The Education Trust.

[65] Children of parents with college degrees are more likely to attend college themselves than children of parents who do not have college degrees.

[66] Hagedorn, Linda Serra (2005). "Square Pegs: Adult Students and Their "Fit" in Postsecondary Institutions," in *Change: The Magazine of Higher Learning.* January/February 2005. American Association for Higher Education.

[67] *The Economic Impact of Community College of Philadelphia*, Institutional Research Report #140, Office of Institutional Research, Community College of Philadelphia. October 2004.

[68] http://www.brookings.edu/es/urban/livingcities/Philadelphia.htm

[69] According to Rand Corporation estimates that disposable income increases $3,500 for a 30-year old African-American woman head of household who completed a college degree in California in 1997. The same study estimates a savings in public social services of $3,500 per year for each 30-year old African-American woman head of household who completed a college degree in California in 1997. From Vernez, Georges, Richard A. Krop, and C. Peter Rydell (1999). *Closing the Education Gap: Benefits and Costs*. Center for Research on Immigration Policy. RAND Education.

[70] http://www.kiponline.org/survey.pdf. Released June 2004 by the Knowledge Industry Partnership.

[71] For a list of 17 good support practices, developed by Jobs For the Future, see www.workforceadvantage.org)